The Croonian Lectures:

A CONTRIBUTION TO THE STUDY OF THE BLOOD AND THE CIRCULATION.

Delivered before the Royal College of Physicians of London,

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LECTURE III.[1]

Delivered on June 9th.

THE BLOOD.

MR. PRESIDENT AND GENTLEMEN,—In this and the following lecture I propose to submit the results of some observations made with the view of inquiring into the physiology of the red blood corpuscle.

Notwithstanding recent advances in our knowledge of the chemical, histological, physiological, and pathological aspects of the blood there still remains much to be learnt in regard to the definite influence of the leading physiological conditions and processes upon the life history of the red corpuscle. There are certain views entertained as to its birthplace and as to how it terminates its little cycle of life, and we know well enough the all-important *rôle* it plays in the organism which it serves; but our present knowledge of the physiology of the corpuscle fails to furnish definite answers to such questions respecting it as the following. What is the influence of the different physiological conditions that obtain from hour to hour, and indeed from day to day and from week to week, on the relationship which subsists between the corpuscle and the plasma on the one hand and the hæmoglobin on the other? What are the ordinary limits of the variations thus induced in health and, furthermore, in disease? Does such a physiological process as that of digestion, which has a far-reaching influence throughout the organism, affect the red corpuscle either in regard to its development and growth or to its dissolution, or in regard to its relations to the plasma and to the hæmoglobin? In other words, what is the physiological history of the corpuscle from the inception of food to the absorption of the products of digestion? What is the influence of water? Is the red disc in its twofold relations to the plasma and to the hæmoglobin affected by rest and exercise? Under what physiological conditions does the hæmoglobin value of the corpuscle rise and fall? The solution of such questions as these is highly desirable from a purely physiological standpoint, and it is, moreover, an absolutely necessary preliminary to any satisfactory clinical hæmometric observation.[2] The present inquiry was undertaken in the hope that it might elicit some facts which may form a contribution, meagre though it be, towards this end. It was, however, soon apparent at the very outset of it that though it was comparatively limited in scope it was, nevertheless, one that would claim the labour of some years before it yielded a full answer; therefore, the few results which have been gleaned during the past twelve months can only be regarded as preliminary.

APPARATUS AND METHODS OF OBSERVATION.

The adoption of accurate hæmometric methods was of course the first requisite in embarking on this inquiry, and the determination of the relative value of the methods in use and of the new ones which it was found necessary to devise for this investigation involved the expenditure of much time and observation in the preparatory stage. I will submit first the results of this preliminary work because they led to the adoption of new modes of observation which should be fully described, but before doing so I will rapidly review some of the methods in present use.

The methods hitherto employed for determining oxy-hæmoglobin are founded on the following principles: (1) the estimation of iron in the ash; (2) the use of the spectrophotometer; and (3) the indication of quantity afforded by depth of colour. The method of determining the iron in the ash and that of the spectro-photometer are wanting in that important quality of practicality which, in the collection of a large body of data, as is demanded by this inquiry, is an absolute necessity. A time-saving yet accurate method was required. The hæmometer of von Fleischl and the hæmoglobinometer of Gowers, both founded on the colorimetric principle, having been most widely accepted in the laboratory and in clinical work, seemed to afford the most promise. But observation led me to doubt whether they afforded readings of sufficient definiteness, reliability, and accuracy for this physiological inquiry. It was therefore determined to ascertain if the colorimetric principle could be employed more advantageously than obtains in these instruments, and the results observed induced me to adopt a new mode of applying that principle.

The methods at present employed for determining the blood corpuscles are (1) examination by the microscope, and (2) percentage estimation by the centrifugal machine. The enumeration method is perhaps on some grounds preferable to centrifugal determination, especially for clinical work, for it enables any alteration in the corpuscles to be observed at the same time. But repeated observation has shown that the method as ordinarily applied by enumerating ten or even thirty squares does not possess that degree of accuracy with which it is usually credited. Though all the necessary precautions have been taken, a series of trials derived from the same mixture of a sample of blood may yield the wide variation of 10 per cent. The possibility of such a large margin of difference as this must render the method totally unreliable for any physiological inquiry, however immaterial it may be for clinical purposes. Extended enumeration—e.g., to 120 squares—will of course average the discrepancies; but it necessarily involves the expenditure of more time and labour than are at the disposal of most observers—especially, too, as physiological work demands the largest possible collection of data and much repetition. It was therefore found necessary to search for a simple time-saving method of hæmocytometric observation which, founded on extended enumeration in the first instance and attaining to the accuracy of it, might be substituted for it. I was fortunate enough to find such a method, which will be described in the next section of this lecture. These preliminary observations demonstrated that the methods in present use for the estimation of the hæmoglobin and the corpuscles are not sufficiently precise for an inquiry into the physiology of the red corpuscle.

THE APPARATUS EMPLOYED IN THIS INQUIRY.[3]

I.—The Hæmoglobinometer.

Before describing the apparatus it is advisable, first of all, to explain the principle that underlies the arrangement adopted, to point out some of the difficulties that have been met with and to describe the steps that have led to the present form of the instrument. A review of all these preliminary matters is essential to a clear conception of the reasons that have determined the adoption of the several details of construction.

The principle followed.—As already stated, the method is founded on the colorimetric principle. But I have modified the applications of that principle as hitherto adopted in the following ways: (1) double transmission of light (or reflected light) is used instead of single transmission; (2) a pure white background is selected on which the solution of the blood and the standard colours rest; (3) the standard is presented as a series of definite gradations; and (4) the colour of the blood solution is compared with that of the standard in camera.

1. *Reflected (or doubly transmitted) light preferred.*—It seems to me that certain advantages are secured by comparing the sample of blood and the standard by means of reflected rather than by transmitted light. These advantages may not at first sight be very obvious, but in this particular mode of observation they nevertheless exist. In the first place, the depth of colour when observed by double transmission of light is nearly twice as much as it is when viewed by single transmission, for the blood solution is seen through a medium of the same colour induced by the incident rays and consequently the colour of the reflected

[1] Lectures I. and II. were delivered on June 2nd and 4th and published in THE LANCET of June 6th and 13th respectively, and Lecture IV. was delivered on June 11th.

[2] Much has already been achieved in this field by the labours of a number of workers, such as Hayem and his pupils Dupérie and Cadet, Grawitz, Schiff, Tietze, Egger, Schüller, Hedin, Cohnstein and Zuntz, Stierlin, Miescher, and Lloyd Jones, among many others too numerous to name individually.

[3] These hæmometric methods were described at the meeting of the Physiological Society held at University College last March.—Proceedings of the Physiological Society, Journal of Physiology, 1896.

rays is proportionately increased. Hence a much smaller measure of blood is required under reflected light to produce the degree of colour made apparent by transmitted light, and it is obvious that in a clinical work such a reduction may sometimes prove a distinct advantage, as when 5 c.mm. of blood amply suffice in place of 10 or 20 c.mm. Then, again, light reflected lends itself much more satisfactorily than light only once transmitted to the attainment of uniform physical conditions in the strata of the blood solution and of the standards; and in consequence of the exactly equal adjustments which thus become possible the finest differences in depth of colour become recognisable, and the readings can be made with an exactitude which cannot otherwise be obtained. This outcome of the improved definition has tended to greatly reduce that unavoidable variable element in all observation, the equation of the observer.

2. *The uniform white background.*—The use of reflected light introduces a difficulty in regard to the reflecting background, for this must be uniform, not only in the same instrument, but in other instruments that may be made. The slightest variation in shade or tone of colour must produce discordant readings. In the earlier observations opal glass was selected for this purpose; it was soon discovered that different samples of it were far from invariable in colour. It, therefore, became necessary to select some white substance that could be relied on for uniformity and purity of colour; and dry, finely powdered precipitated lime sulphate was chosen. This substance forms a most delicate reflecting surface and along with the invariable position of it immediately under the blood solution and the standard colours contributes considerably to the exactitude of the readings.

3. *The standard.*—It is a matter of great practical importance in constructing a hæmoglobinometer to determine how the standard should be presented so as to obtain the most definite readings. In von Fleischl's hæmometer the whole scale is formed by a wedge of coloured glass, the depth of colour gradually merging off to the lowest reading; and as the field of view always embraces no less than twenty degrees—i.e., twenty degrees heavier on the right than it is on the left—it is easy to understand, even when the colour of the glass matches that of the blood-solution, that very often considerable uncertainty is apt to exist before an estimation can be made. This mode of presenting and using the standard is obviously faulty. It has been found, however, that all doubt as to the position of any particular sample of blood on the scale is entirely obviated when the latter is split up into a number of definite gradations; and this mode of disposing the standard has therefore been adopted. Each grade becomes a subordinate standard, definitely recognisable from its neighbours, and by means of a simple method, to be subsequently explained, the intervening units are read. Moreover, there exists another reason why each stage ought to be separately standardised and why a mere gradation of the same colour is not only indefinite but is misleading, and that is the specific colour curve of the blood, which will be presently described.

On setting up the standard.—To any one who has not made an attempt of this kind it may seem an easy matter to prepare an imitation of the exact colour of a given percentage of normal blood in water, and thus to accomplish the first step towards the setting up of a hæmoglobin standard. But a few trials will dispel such an illusion and will demonstrate the existence of a number of unforeseen difficulties which are inseparable from the task. The standardising involves two steps: (*a*) the adjustment of colour, and (*b*) the determination of the scale.

1. *The adjustment of colour.*—In the first instance, following others in the same line of work, experiments were made with carmine or carmine and picro-carmine in a glycerogelatin basis. After much observation it was finally settled that the closest approximation to the colour of the blood solution was obtained by a combination of carmine, picrocarmine, and hæmatoxylin, the blood and the standard solutions being observed by candlelight in cells having a background of opal glass. The gradations, of course, necessitated that the cells should be quite uniform in depth. After the lapse of some few weeks it was obvious that the colour of the standard was undergoing a change, especially in the lower grades, which were becoming darker and brownish. That led to some experiments on the effect of light on the constituent pigments, and it was found that all of them were unstable when exposed to daylight, and especially to direct sunlight. Of the three constituents, having found that hæmatoxylin was the most fugitive it was excluded. Still the carmines became slowly affected by the exposure incidental to work and observations had to be made in camera. Furthermore, at an early stage of the observations another difficulty was encountered, the explanation of which was not at that time forthcoming. The gradations of the standard were made by diluting the carmine solution of the highest grade to the required degrees. When, however, the blood solution which exactly matched the topmost gradation of the scale was diluted in exactly the same manner, marked discrepancies were apparent between these dilutions and the standard gradations; especially was this the case in the lower half of the scale. They should have agreed, but they did not. Since then a satisfactory explanation of this discrepancy has been afforded by Mr. Lovibond, whose valuable and practical work on colour measurement will presently be referred to. This observer has shown that every coloured substance when progressively varied in concentration or in strata thickness furnishes a colour-curve peculiar to itself—a curve of colour composition which he designates "the absorption colour-curve" or "specific colour-curve."[4] According to this explanation the specific colour-curves of the solutions of the carmines and of the hæmoglobin, though coinciding at a certain degree of concentration diverged below that point, and thus the disparities between them became more and more apparent as the dilution increased. This view of specific colour-curves derives some support from the spectroscope, for it is known that the position and the amount of absorption correspond with the percentage solution of the coloured substance under examination. It therefore follows that no one substance or combination of substances can correctly furnish a percentage series of gradations of hæmoglobin. The uniform tone of colour of the glass wedge of von Fleischl's hæmometer, for example, cannot properly represent the colour of the blood solution throughout the scale. In corroboration of this conclusion we have the observations of Osler, Neubert, and Letzins as quoted by Busch and Kerr.[5] "Osler says that the error in the Fleischl instrument may not be more than 2 per cent. in blood which is nearly normal, but he cites Neubert and Letzins as having shown that in a much impoverished blood the error may be as high as 20 per cent." In order to avoid the difficulties presented by the instability of pigments when exposed to light and moisture, and by the specific colour-curve of the blood it may occur to some, Why not standardise with oxy-hæmoglobin itself? Unfortunately, here again gradual change of colour arises as a bar to its adoption; even though the solution of it is sealed up it becomes reduced and no longer retains the colour of freshly drawn blood. Fortunately, however, all the difficulties which have been encountered in attempting to standardise the colour of the blood have now been resolved, and there no longer exists a necessity to continue the search after a standard which is permanent and which is in accord with the specific colour-curve of the blood, for Mr. Lovibond's practical and accurate method of colour-measurement supplies this desideratum.

In as few words as possible I will endeavour to convey an outline—the merest outline—of Mr. Lovibond's mode of determining colour, and for the necessary details I must refer you to his work on the subject[6] and to various contributions he has made to the societies on the application of his method. This observer has devoted at least twenty-five years to the practical study of light and colour and the outcome of his work is the construction of a system of measuring colour, which is now being adopted in various trades in which colour is a leading indicator of the quality of produce or material and also in some forms of analytical work, such as in the estimation of lead in potable water,[7] of carbon in steel, &c., and in the testing of colour-blindness.[8]

[4] Colorimetric Analysis, or Colour as a Means of Quantitative Estimation, by J. W. Lovibond; Journal of the Society of Chemical Industry, 1894, and the Absorptive Method of Colour Analysis, by J. W. Lovibond; Journal of the Society of Dyers and Colourists, 1894-95.

[5] The Relation of the Specific Gravity of the Blood and its Hæmoglobin Percentage. By F. C. Busch and A. L. Kerr. Philadelphia Medical News, Dec. 21st, 1895.

[6] Measurement of Light and Colour Sensation, by Joseph W. Lovibond, F.R.M.S., the Colour Laboratories, Salisbury.

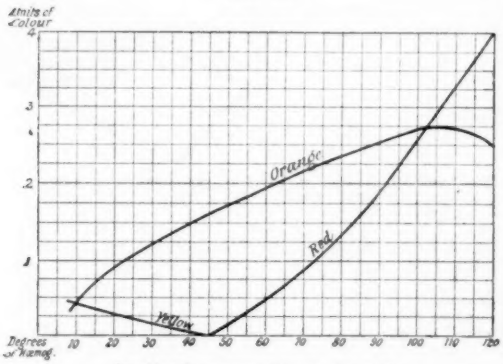
[7] It is claimed that so minute a quantity of lead as one-millionth of 1 per cent. may be detected by Mr. Lovibond's method.

[8] When I set up my standards with Mr. Lovibond's standard colour-glasses I was not aware of any practical hæmometric work having been done with Mr. Lovibond's tintometer. I have since ascertained that Dr. Copeman has been using it for this purpose during the past few years with much satisfaction.

The matching and the measurement of colour are effected in a camera apparatus (the tintometer) by the aid of three sets of definitely graded glasses, one for each of the dominant colours, red, yellow, and blue. The graduations are of equivalent value in all the sets, the test of equivalency being the destruction of all colour and the production of grades of neutral tint by combining the equivalent glass of each set, the observation being made with white light. When the equivalent glasses of two of the dominant colours are combined the three subordinate colours are produced—namely, green, blue, and violet. All other shades and degrees of colour are obtained by combining the glasses of the dominant colours in non-equivalent proportions, so that any colour can be accurately matched by them. The colour scales are made up of units and decimal parts of a unit down to 0·01, which is the lowest fraction of a unit that can be differentiated by the vision. The fixing of the unit has necessarily been arbitrary, as has, indeed, been that of any standard measure, such as the mass of distilled water which has been chosen to represent a gramme, &c. Inasmuch as the unit chosen complies with the requisites of a standard —being uniform, recoverable, and arbitrary—it should be accepted as such; the actual dimensions of it, so long as they serve the practical ends in view, are of no importance. Of course, the correct grading of the glasses from the original standards is essential to the success of the method, and this is, I believe, effectually attained by an elaborate system of cross-checking by a series of trained matchers. These graded glasses of determined value provide a numerical quantitative measure of any colour to be gauged, and they enable the measurements made by them to be recorded, so that the colour thus measured may be reproduced at will or may be preserved indefinitely.

With the view of fixing the blood standards I had the advantage of working in the colour laboratories at Salisbury and of obtaining the valuable assistance of Mr. Lovibond and of his well-trained staff. Samples of blood taken at different times of the day were diluted with distilled water and standardised by my carmine standard of the highest grade. The colour of the different percentage dilutions placed in the blood-cell was then carefully matched and determined by the graded glasses, finely powdered precipitated lime sulphate forming the background of the cell and of the glasses, and the estimations were made by aid of the camera tube presently to be described. The standard gradations of the apparatus were thus settled and they form the two specific colour-curves of the blood—one determined by uniform candle-light and the other by white daylight. Here are the two sets of standards, and you will observe that the difference between them is so remarkable that it is obvious that hæmoglobin cannot be estimated by the same standard used indifferently in the two kinds of light. The colour-curves (Figs. 14 and 15) are made by entering the colour units on the side of the diagram to form abscissæ with the standard gradations which appear at the foot. In daylight (Fig. 14) it will be observed that the

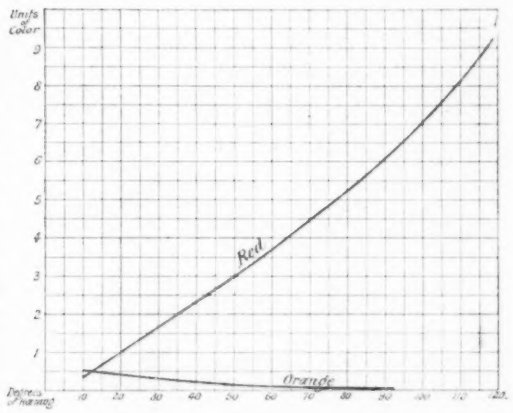
FIG. 14.



Specific colour-curve of blood. Daylight.

specific colour-curves of the blood are madeup of varying proportions of red, orange, and yellow. In the lower percentages (10, 20, 30, and 40) red as a separate colour does not exist: it is only present in combination with yellow as orange, which is made up of equivalent proportions of each. In these lower gradations the place of red is taken by yellow. Between gradations 40 and 50 yellow dies out, and then red appears and progressively increases until at the highest grade it is the dominant colour. In these daylight gradations the curve of orange is the predominant one, though it begins to die out in the higher part of the scale. In candle light (Fig. 15) the colour-curves are quite different and are less

FIG. 15.



Specific colour-curve of blood. Candlelight.

complicated. Red is predominant throughout except at the lowest grade, where it is subordinated to orange. From this point upwards orange gradually diminishes and vanishes entirely at 90, and then pure red distinguishes the highest grades. The remarkable difference between the colour-curves furnished by the two kinds of light is doubtless due to the preponderance of yellow emitted by the candle flame.

The standard colours and the gradations having been duly measured and determined there still remains a further adjustment to be made. It is found that the solution of blood possesses in a remarkable degree the quality of colour-purity or brilliancy—a quality which is distinct from colour-depth and colour composition, for it remains after these have been duly matched.[9] Inasmuch as this property of the blood may prove a distracting element with some observers, and may possibly lead to errors in observation, it is important that it should be eliminated from the views, especially as Mr. Lovibond's system of graded glasses supplies the remedy. It is met by using one of the lower grades of the blue glasses as a cover-glass to the blood cell; and it has been found that this adjustment does not disturb the correct reading of the hæmoglobin.

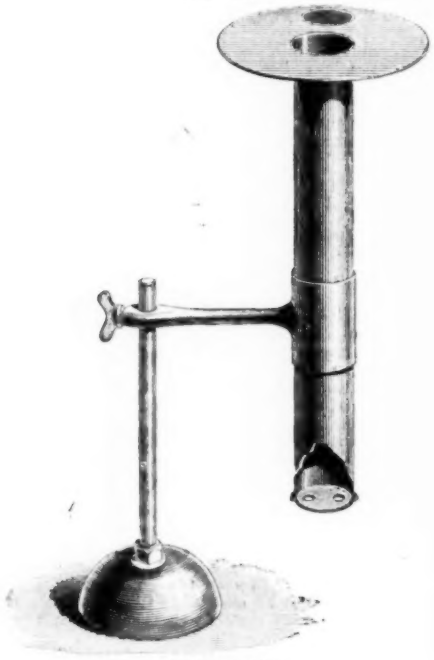
B. The determination of the scale.—The hæmoglobinometers hitherto used merely furnish estimations of hæmoglobin which are relative to a certain quantity believed to represent the proportion present in the blood of man in health—a quantity which is, moreover, undetermined and therefore unknown. Inasmuch as it will be shown presently that the blood of healthy subjects is not quite so definite and invariable as it is usually believed to be, it would seem to be more satisfactory to be able to quantitatively determine the amount of oxy-hæmoglobin present in each sample of blood tested than to rely entirely on an indefinite arbitrary standard. The quantitative equivalence of the scale in oxy-hæmoglobin has therefore been determined. The blood of the dog was preferred to that of man for this purpose, because the process of separation is comparatively easy, while in the latter it is in many respects unsatisfactory. Great difficulty was, however, encountered in obtaining a pure product, which retained the exact colour of freshly-drawn blood, so that accurate estimations of it could be made. Ultimately this result was attained by determining certain percentages of the moist crystals

[9] Mr. Lovibond tells me that this fact is occasionally observed in the matching of other substances, notably some of the aniline dyes.

and afterwards correcting for the water.[10] Each degree of the scale is equivalent to 0·155 per cent. oxy-hæmoglobin in the sample of blood tested, therefore 100 degrees represent 15·5 per cent; and determinations above or below that point will require the addition or subtraction of 0·155 per cent. for each degree. It may be mentioned that Preyer[11] gives the average percentage of hæmoglobin for women as nearly 13 and for men 14. Dr. Augustus Waller[12] has found 17 per cent. in the blood of the dog. Observation has shown that the mean percentage of hæmoglobin present in the blood of man in health containing 5,000,000 corpuscles per c.mm. (or 100 per cent. of corpuscles) is represented by 100 degrees.

4. *Observation to be made in camera.*—From the first it was found that a reliable judgment between the two colours of the blood solution and of the standard when closely approximated could not be formed unless the colours were observed through a tube so arranged as to shut off all side lights and other causes of distraction. The best results were obtained by using a long tube (Fig. 16) resembling a microscope tube,

FIG. 16.



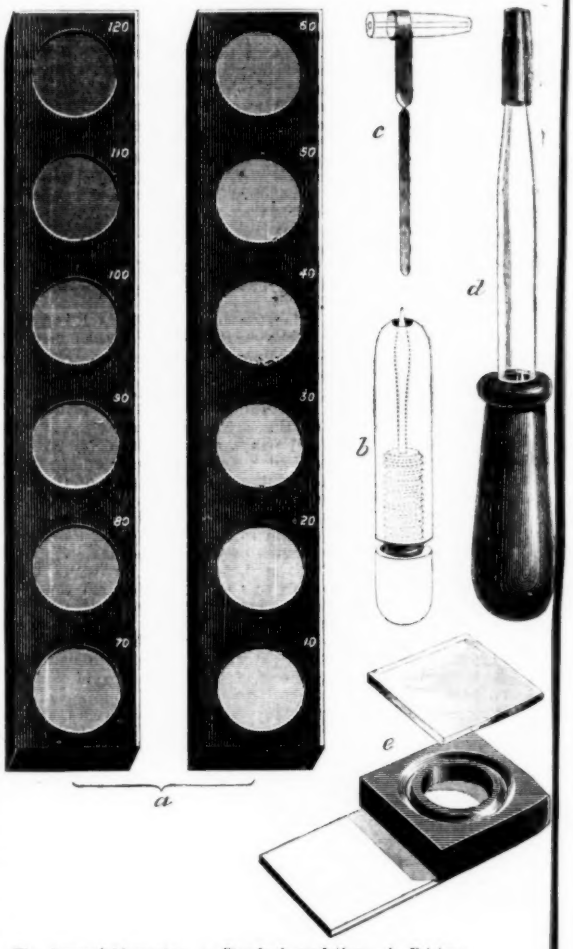
The Camera Tube.

blackened inside, and presenting below two circular holes of 5 mm. in diameter, so as to include only a small but equal area of each of the colours to be compared, and encircled above by a diaphragm or collar which shields the eyes from the direct rays of the candle flame. The tube is held in a vertical position over the colours by means of a side-stand, and it may be adjusted to the required height so as just to avoid any shadow which may be cast by the rays of the candle flame impinging on the lower end of it. A piece of green glass is let into the collar, for it was found that when the sense of colour appreciation was impaired from any cause, such as long and frequent observation, it was restored or was even intensified after looking at the candle for a few seconds through the green glass (Fig. 16).

The apparatus.—A few words remain to be said on the parts of the apparatus and how to use them. These are: (1) an automatic blood measurer; (2) a mixing pipette; (3) the blood cell and cover glass; (4) the sets of standard gradations; (5) the riders; (6) the camera tube; (7) the light; and (8) a bottle of antiseptic fluid, the prickers, needles, and thread.

1. *The automatic blood measurer* (Fig. 17 *c*) has a capacity of 5 c.mm. and fills readily by capillary attraction. It differs from the fragile capillary measurer hitherto used in being made of stout glass and therefore serviceable, in being larger and more manipulable, and in having the end which is presented to the blood well polished, so that all traces of blood can be entirely removed from it by the finger. The bore is dried out before an observation by passing a needle threaded with darning cotton through it. The handle is useful for stirring together the blood and water in the blood-cell. 2. *The mixing pipette* (Fig. 17 *d*) is provided

FIG. 17.



The hæmoglobinometer. *a*, Standard gradations. *b*, Pricker. *c*, Automatic blood measurer. *d*, Mixing pipette. *e*, Blood cell and cover.

with a rubber nozzle which fits over the polished end of the blood measurer and ensures the complete rinsing out of the blood with the first few drops of water. 3. *The blood-cell* (Fig. 17 *e*) is of more than sufficient capacity to ensure the complete liberation of the hæmoglobin. It yields a blood-solution of rather less than 1 per cent. when filled level with the rim. It is itself the measure of the amount of water to be added and it is quite easy to fill it accurately. 4. *The standard gradations* (Fig. 17 *a*) are arranged as circular discs in two slabs—six in each—and they represent the divisions of 10 degrees of the scale, from 10 to 120 inclusive. 5. *The riders* provide for the reading of the

[10] In carrying out this part of the work I must express my indebtedness to Mr. Moore of the Physiological Laboratory of University College for his valuable aid.

[11] Die Blutkrystalle.

[12] An Introduction to Human Physiology, 1893, p. 35.

degrees intervening between each of the standard gradations. When they are used the slip of colourless glass is placed over the cover of the blood-cell so as to balance the effect of the mere layer of glass of the rider which is laid over the standard. Two sets of riders have been arranged — one suitable for physiological observation, to ensure the finer readings—e.g., of one degree; and the other, sufficient for ordinary clinical observation, to enable the observer to determine differences of 2½ degrees. For the reading of the units nine riders are required which are grouped into three slides. It should be premised that the value of the riders is neither the same in the two standards required for candle-light and daylight nor in the upper and lower halves of either standard. This want of uniformity arises from the differences of the specific colour-curves in the two standards and in the two portions of each. In the six lower grades of both standards the value of each rider is double that in the upper six gradations. In the transition grades—the lowermost of the upper half and the uppermost of the lower half—this rule does not quite accurately apply, but inasmuch as the departure is constant in all observations, and is, moreover, slight, it may be disregarded for the sake of simplicity in using the riders. The daylight standard is less adapted to the finer readings than the candle-light one, because the value of each rider when used with it is doubled—i.e., number one rider becoming equal to 2 degrees in the upper half of the scale and 4 degrees in the lower half. Therefore, the candle-light standard is preferable for such readings, and when it is used each rider has an equivalent value in the six stronger grades—1=1 degree, and a double value in the six weaker grades 1 = 2 degrees. For ordinary reading one rider only is used—namely, that which is equivalent to 5 degrees in each slab of the standards. Therefore, each set of six standard gradations, whether for candle-light or daylight, has its own rider. When the blood solution is deeper in colour than any particular standard gradation, but is overstepped by the rider, the mean between the two may be taken as the reading, and the same rule will apply when the colour of the blood is higher than the rider, but is not so high as that of the next standard grade above. Hence this single rider may be made to provide readings of 2 5, 5, and 7 5. 6. *The camera tube.* It had already been pointed out that observation should only be made through a camera tube, and the one which has been employed throughout this inquiry has been described. It is, however, perhaps somewhat elaborate for the ordinary course of clinical observation; therefore, one of simpler construction is provided which may serve this purpose and, being collapsable, will pack into a small compass with the other parts of the apparatus. 7. *The light.* For observation by artificial light it has been found that the small-sized wax candles known as Christmas candles are the most satisfactory in affording the most suitable intensity of light, and one, moreover, which is sufficiently uniform. The position of the candle is important; it should be such as to shed an equal light on the blood-cell and the standard, and also such as to furnish a high light, so that the flame should be three or four inches above the cells. The distance must be regulated by the observer, who will soon learn how to adjust it to the best advantage, so that he may match the colours with greatest certainty and accuracy. The actual distance does not affect the reading; but when the candle is placed too near the points of observation the illumination becomes too strong and is somewhat distracting, especially when the lower grades are under observation, which require less degrees of light than the higher. In daylight all colorimetric modes of estimating hæmoglobin are less or more unsatisfactory, for they require a uniform degree and kind of light which cannot always be obtained when daylight is resorted to. The colour of the blood solution varies in a marked degree, according as the light is blue or white, or is feeble or waning, or is strong. Therefore, the candle-light standards are to be preferred as being always available with a uniform light. 8. *The antiseptic fluid and pricker.* Before every observation the pricker should be dipped into an antiseptic solution that will not corrode the metal, and a little of the solution should be smeared over the part to be pricked. I prefer a mixture of equal parts of carbolic acid and spirits of wine.

How to make an observation.—The bore of the blood-measurer is first of all dried out by passing through it a needle threaded with darning cotton, and then the polished point is presented to the drop of blood which flows, under the least possible amount of pressure, on pricking the inner side of the pad of the finger or near the root of the nail. Care must be taken to see that the pipette is really quite filled, and if it has been necessary to re-apply it to the drop it should be observed whether there is a break in the column of blood. Any blood adhering to either end must be carefully wiped away with the finger. The rubber nozzle of the mixing pipette, charged with water, is adjusted over the polished end of the pipette, and the blood is washed into the blood-cell by pressing through the water drop by drop. The handle of the pipette is then used as a stirrer, and the further additions of water are made to impinge on it, for it serves to graduate the size of the drops required to accurately fill the cell. It is in this way quite easy to do this when the observer catches the reflection of the light on the surface of the fluid. A final thorough mixing with the handle will be required, and perhaps another slight addition of water may be necessary to secure a level filling. The cover-glass is then adjusted, when a small bubble is sure to form, a sure sign that the cell has not been overfilled. The blood cell is then placed by the side of the standard gradations and the eye quickly recognises its approximate position on the scale. Then the camera tube will more accurately define it. If it is found that the blood solution is matched in depth of colour by one of the standard grades the observation is of course at an end, but if it is observed to be higher than one gradation, but lower than that above it, the blood-cell is placed opposite to the former and the riders are added to complete the estimation.

II.—The Hæmocytometer.

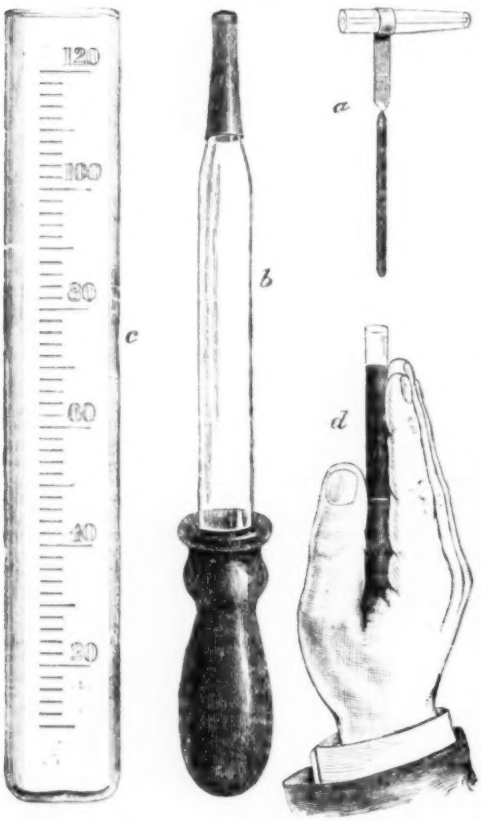
The principle followed.—The method is based on the following facts:—*a.* When a candle-flame is viewed through a glass tube containing water a transverse line of bright illumination is seen, consisting of closely packed, minute images of the flame produced by the longitudinal fibrillation of the glass. In the process of drawing out the tube becomes minutely corrugated or fibrillated in the direction of its axis. The corrugations are extremely small, but they are easily observed when a tube is held before a flame and the structure of the glass is examined by a pocket lens, when the corrugations are seen to produce alternate bright and shaded lines disposed in the vertical direction. Each corrugation acts as a lens, hence the horizontal line made up of a congeries of images of the flame. *b.* When some fixing fluid (such as Hayem's, or a solution of potassium ferrocyanide, sodium chloride, &c.) is added to blood the mixture presents a certain degree of opacity according to the amount of blood or of the fixing fluid. *c.* The opacity thus produced completely shuts out of view the illuminated line, until, on diluting further, a definite point is reached, when it can just be detected as a delicate streak of light across the tube—the dawn, as it were, of the bright minute images of the flame seen when the opacity is absent or is further reduced. Repeated observation has shown that the development of this delicate horizontal line by dilution with the fixing fluid selected is a very sensitive indicator of the percentage of the blood corpuscles. This was shown in various ways; for example, by the measure of the fixing fluid required to bring the line into view being always in proportion to the different quantities of the same blood experimented with, and therefore in proportion to the number of the blood corpuscles present at each observation.

The apparatus.—The principle just described has been made available for determining the percentage of the cellular elements of the blood by mixing a definite measure of the blood with Hayem's solution in a graduated flattened tube. The apparatus consists of (1) a graduated flattened tube; (2) an automatic blood measurer; (3) a mixing pipette; (4) a candle; and (5) a bottle of Hayem's solution.

1. *A flattened tube* (Fig. 18 *c*) has been adopted because it was found that a round tube of such a diameter as to furnish the required degree of opacity will only provide a sufficiently wide scale when a much larger quantity of blood is taken than is generally used for observation of the blood; whereas when the observation is made through the long diameter of a flattened tube it is not necessary to use more than 10 c.mm., and the scale is lengthened in proportion to the reduction of the lateral area. A tube of 15 mm. in the long diameter and 5 mm. in the short diameter provides a good workable scale of 12 centimetres for the determination of 125 per cent. of corpuscles. The divisions of the scale

represent 2 per cent. and they are sufficiently apart to allow the eye to read 1 per cent. or even less. 2. *The automatic blood measurer* (Fig. 18 *a*) is the same in construction as that used in the estimation of hæmoglobin, only its capacity is greater. 3. *The mixing pipette* (Fig. 18 *b*) is provided with a rubber nozzle which fits over the polished end of the blood measurer. 4. *The candle* should give a small flame, for that furnishes a more defined line than is obtained from a large flame. The small-sized wax candles known as Christmas candles are the best. A reduced gas-flame also answers perfectly well. 5. *Hayem's Solution.* It was found that each kind of fixing fluid furnishes its own scale—Hayem's[13] was selected as the most satisfactory. The chief

FIG. 18.



Hæmocytometer. *a*, Blood-measurer. *b*, Mixing pipette. *c*, Flattened tube. *d*, Mode of holding the tube for observation.

advantages of it are that it is cleanly to use, that the corpuscles are less affected by it than by other fixing fluids and may be examined under the microscope after the observation has been made without fear of material changes, and that the reading undergoes no variation after the lapse of many hours—e.g., twelve—so that the blood may be washed into a tube and the observation may be made later if more convenient. It may be suspected, however, that the proteids of the plasma may be precipitated by the mercuric chloride present in Hayem's solution, and thus a variable addition may be made to the opacity caused by the corpuscles. This point has been carefully tested with the result that it does not present a source of fallacy. 50 c.mm. of the plasma separated from a blood containing 100 per cent. of corpuscles were washed into the tube with Hayem's solution, but only as far as the 20 per cent. mark, so that the solution contained twenty-five times as much of the proteids as would be contained in 10 c.mm. of the blood diluted to the 100 per cent. mark; and there was apparent the merest haze, so small, indeed, that it could not possibly be determined. It is therefore obvious that the proteids of the plasma do not increase the opacity induced by the fixing of the corpuscles by means of Hayem's solution. The determination of the scale was made by the enumeration method extended to 120 squares applied to the blood of normal man. 100 per cent. presents the generally accepted standard of 5,000,000 per mm.; therefore, 80 per cent. is equivalent to 4,000,000, &c.

The method from the physiological standpoint.—The white corpuscles in a state of health do not affect the readings. The proportion of 1 white to 500 red, or one-fifth per cent., is equivalent only to one-tenth of one of the smallest divisions on the scale, and this is unreadable. So that were the white corpuscles to increase to 1 in 250, such a rise would not appreciably affect the reading of the red corpuscles. The normal variation of the white corpuscles therefore may be safely neglected.

The method from the clinical standpoint.—I have employed this method in clinical observation and found it not merely simple and time-saving, but useful. Apart from the leucocythæmic condition the white corpuscle is not a source of interference. A distinction should be made between the method of enumeration and a volumetric method like this or like that of centrifugal separation, for the aim of the former is to determine the individual corpuscle irrespectively of size, whereas that of the latter is to refer the collective volume of the corpuscles to that of the normal standard. Pathologically it is important to ascertain the size of the red discs, and, therefore, the microscopical inspection of the fluid is a useful addendum to the observation. So long as the average size of the corpuscles is unaltered the method is comparable with that of enumeration, on which it is founded. But inasmuch as that in certain cases may vary—e.g., the microcytes of chlorosis[14] and the macrocytes of pernicious anæmia—the method should, strictly speaking, be regarded as a volumetric one like that of centrifugal separation. It is highly probable that it is clinically advantageous to be able to estimate the corpuscles in any case by comparing them with the normal percentage volume employed as a standard. Such an estimation will probably afford a true gauge of the aggregate corpuscular value of the blood; for it is the collective capacity of all the corpuscles, whatever their size, that is measured by the physiological standard.

The mode of observation.—The pipette, previously dried out by passing through it a needle threaded with darning cotton, having been accurately filled, the slightest traces of blood on the outside of the glass either at the ends or on the side are very carefully wiped away with the finger. The rubber nozzle of the mixer filled with Hayem's solution is then applied over the bevelled end of the pipette and the blood is thoroughly washed into the flattened tube. The amount of the fixing fluid to be used in the first instance will be roughly suggested by the previously made hæmoglobin estimation; if this afforded from 90 to 100 per cent. or more the dilution may at once proceed to the 80 per cent. mark, but if it yielded a lower figure the preliminary dilution should be smaller. The contents of the tube are then uniformly mixed by inverting the tube a few times with the thumb over its mouth, care being taken on removing the thumb to draw it over the lip of the tube so as to restore as much as possible the fluid adhering to it. This procedure should of course be repeated after every addition of the diluting fluid. The observation is made in a dark room or in a darkened room free from cross lights. The observer stands 10 ft. from the flame. In making the observation it is important to shut out as much as possible the diffused light of the candle. The most satisfactory way to do this is to place the lower end of the tube, with its long diameter in a line with the candle, in the concavity between thumb and forefinger, so as to make as it were a frame for it, and then to bring this part of the tube quite close to the eye (Fig. 16*d*). The observer must look out sharply for the first appearance of the transverse line of light which dilution brings into view, and the earliest indications are obtained by turning the tube on its axis when the

[13] The formula is as follows: hydrargyri perchloridum, gramme 0·5; sodii chloras, gramme 1·0; sodæ sulphas, grammes 5·0; aqua destillata, 200 c.c.

[14] So far the only discrepancy which has been met with between this method and that of enumeration has been observed in chlorosis, in which when heavy microcytes exist the readings of the tube are somewhat reduced.

line will be caught first of all on the side. The fluid is then added point by point until the line is just apparent, when the long diameter of the tube is directed to the flame. This indication is a very delicate one, and requires a little pains at first in order to clearly recognise it without overstepping the necessary dilution, which of course brings it more definitely into view. The first difficulty is the only one, for when the earliest appearance of the line has been once observed it cannot fail to be afterwards recognised.

There is, as a rule, a rather rapid transition between the total absence of the line quite across the tube and the presence of it. Most observers will find no difficulty in defining their readings by stages of half a division—i.e., 1 per cent. It is not necessary to hurry over each observation after adding more fluid and mixing up, for the opacity remains uniform for several minutes.[15]

The method followed in collecting data.[16]—The blood of a large number of healthy subjects belonging to the average well-nourished class has been observed by these new methods with the view of ascertaining the influence of age, sex, and other general physiological conditions on the percentages of the corpuscles and hæmoglobin; but I regret that the limited time at my disposal does not permit me to use this material just now. These rapid hæmometric methods have also been applied pretty widely to clinical work in order to determine the value of such observation in the general run of cases, whether these presented the ordinary signs of anæmia or not. The data thus obtained have shown that an extension of direct observation of the blood is likely to yield useful results, for ofttimes it has demonstrated the existence of moderate degrees of anæmia which had escaped ordinary clinical observation and which was sufficient to maintain a condition of low resistance and of instability of health apt to be referred to denutrition of the nerve centres rather than to that of the blood; and it has, moreover, often shown that anæmia was not present when the general symptoms suggested it. Furthermore, it has afforded evidence of the not uncommon occurrence of an apoplasmic state of the blood which is worthy of further observation and study. I again regret that the shortness of the hour admits not of more than mere passing references to the clinical side of this enquiry. A large portion of the physiological data has been derived from a long series of observations on the blood of two subjects, A. and B., the former twenty-seven and the latter fifty-four years of age. In both cases the corpuscles and hæmoglobin have been determined night and morning for over seven months. Besides this long series of consecutive observations innumerable others have been made in order to determine the effects of exercise, of digestion, and of various other physiological conditions on the percentages of the corpuscles and hæmoglobin. The most important part of the physiological data was collected under the conjoint observation of my co-worker and myself while the subjects were placed in exactly the same physiological conditions. The results were not recorded until cross-checked by each of us. There was rarely any discrepancy between us as to the readings; and when any did arise it was trifling and was adjusted to our mutual satisfaction. This fact shows two things: first, the advantage of two observers working together in making such observations as these, and, secondly, the smallness of the personal equation to be attached to the methods employed. Besides the special experiments referred to, a series of consecutive hourly observations was made during nearly three weeks in which the ingestion of food and liquid and the output of urine were noted. Observations have also been made on animals. In the first instance, dogs were used; but it was found that the thick hide renders these animals much less suitable for this kind of observation than man. Some satisfactory and reliable observations were, however, made on the blood derived from the veins on the outer surface of the rabbit's ear showing the range of daily variation and the effects of oxygen and ether.

The normal reading of the corpuscles and hæmoglobin and of the worth of the corpuscles.—One hundred per cent. normal corpuscles should contain hæmoglobin which reads as near as possible 100 per cent., so that when the latter is divided by the former the unit obtained will represent the normal mean value of the corpuscles in hæmoglobin. The attempt, however, to bring the two percentages into accord has not been by any means an easy task because of the wide physiological variation which is continually taking place in both. The present readings cannot claim to be more than an approximation derived from a large number of observations in healthy subjects. The quotient obtained has been aptly denominated by Dr. Archibald Garrod "the worth,"[17] and by Dr. Haig "the blood decimal."[18] In health the average variation extends from 0·95 to 1·05. It will be found that the actual readings of the corpuscles and hæmoglobin in health, whether in the same subject at different times or in different individuals, is a pretty wide one. In men the average normal range embraces from 95 to 105 per cent. and in women from 90 to 100 per cent. In either sex, and particularly in men, a reading below 85 per cent., especially when the hæmoglobin percentage is still lower, is as a rule distinctly subnormal. The determination of the corpuscles or of the hæmoglobin alone is of but little physiological or pathological value.

Normal variations in the proportions of the chromocytes and hæmoglobin.—Six hundred and forty-nine consecutive night and morning observations[19] in subjects A. and B. have furnished some interesting results in regard to the variations of the red corpuscles in their relations to the hæmoglobin and the plasma which occur in the course of twenty-four hours, from day to day, from week to week, and from month to month. The data derived from each subject corroborate those furnished by the other.

Night and morning variations in the percentage of the hæmoglobin.—The most striking fact is the rise during the night and the fall during the day. Taking the figures furnished by both subjects the rise took place in 90·5 per cent. of all the morning and the fall in 88·4 per cent. of the total evening observations. 5·1 per cent. of the morning and 4·4 per cent. of the evening observations were equal. In 100 observations the night rise of hæmoglobin was observed 90½ times and the night fall only 4½ times; and the day fall occurred 88½ times, while the day-rise took place only 7 times. In both subjects the average night rise was 7·2 per cent., and the average day fall was 7·4 per cent., and the maximum rise was 20 per cent. and the maximum fall 21 per cent. It was observed that when the hæmoglobin fell in the night and rose in the day the average rise and fall were much less than when it followed the rule of rising in the night and falling in the day, for then the average night fall was 2·1 per cent. as against 7·2 per cent. night rise, and the average day rise 2·7 per cent. against 7·4 per cent. day fall.

The night and morning variations in the percentage of the corpuscles was observed to be similar to those of the hæmoglobin, only they were not quite so decisive, in both subjects the morning rise and the evening fall being less frequent. The day fall was much more frequently observed than the night rise, the frequency of the former being 74·9, while that of the latter was 68·5 per cent. Probably this difference indicates the influence of fluids taken during the waking hours. Moreover, the observations show that the corpuscles vary less than the hæmoglobin; for the difference between the night and morning and between the morning and evening observations is much smaller and the number of the observations in which they do not vary at all is greater. Whereas the average variation of the hæmoglobin in twenty-four hours is 7·3 per cent. that of the corpuscles is not more than 4·3 per cent., and whereas the hæmoglobin was without variation in 4·3 per cent. the corpuscles were constant in 8·7 per cent. of the total observations in twenty-hours. If it be accepted that the actual number of corpuscles in the same healthy subject remains pretty constant throughout twenty-four hours, it follows from these facts, that though the plasma is distinctly variable at different times during this short period, it is less variable than the hæmoglobin. These night and morning

[15] The corpuscles themselves and the uniform distribution of them may be observed as separate particles when, on turning the short diameter of the tube towards the flame, the contents are examined by means of a pocket lens. As some may wish to use this apparatus, I hope that the Tintometer Company, 6, Farringdon-avenue, E.C., after settling certain technical details to secure uniformity of production, will supply it.

[16] In the collection of the physiological data I have had the able cooperation of Dr. Edgecombe of Harrogate. Our conjoint results have not yet appeared.

[17] Transactions of the Royal Medical and Chirurgical Society, vol. lxxv., p. 191.

[18] Uric Acid, third edition, 1896.

[19] Over 400 observations have been excluded because they were made before the methods of observation were quite settled; they, however, afford the same conclusions as those yielded by the observations which were accepted. Therefore these conclusions as to normal variations of the corpuscles and hæmoglobin may be said to be derived from over 1000 observations. [Since this was written 150 further night and morning observations have been made which afford the same results.]

variations of the corpuscles and hæmoglobin are in keeping with Lloyd Jones's observations on the specific gravity of the blood, for this observer found that, as a rule, it was higher in the morning and lower at night.[20]

Night and morning variations of "the worth" of the chromacytes.—The data furnished by the night and morning observations show that in 74 per cent. of the morning observations "the worth" rises in the night, and in 73 per cent. of the evening observations it falls in the day; the average rise and fall (0·061 and 0·057 respectively) being nearly equal, but with a slight preponderance in the former. This average gain over loss of hæmoglobin probably provides a reserve for variable calls upon it, when at times it is found to be above or below the mean. The subjects A. and B. have furnished data which entirely coincide in the inferences to be drawn from them in regard to the formation and disappearance of hæmoglobin. The influence of sleep apart from that of mere rest on the formation of hæmoglobin has not been ascertained. Inasmuch, however, as observation has not shown that the sleepless are particularly low in their "blood decimal," though perhaps further observations are required on this point, it is probable that the nocturnal rise of hæmoglobin is mainly due to rest—to the abeyance of functional activity and work. Opportunities have been afforded of observing the effects of residing in town and country on "the worth." During the period of observation A., who lives in the country, spent three weeks in London, and B., who lives in town, was in the country throughout September, October, November, and May. In neither case did the blood decimal fall in London, and B.'s was actually higher during the five months he lived in town than it was in the four months he spent away from it. From these, and from other similar facts which have been observed, it is concluded that town life is not quite so unfavourable to "the worth" among the well-fed class as is usually supposed.

Inasmuch as the recent investigations of Neuski, Sieber, Schunck, and Marchlewski have drawn attention to the remarkable similarity between the chemical and spectroscopic properties of some of the derivatives of hæmoglobin and chlorophyll,[21] it may be worthy of remark that though these organic pigments produced by animal and vegetable life very closely approximate at certain points, they seem to be developed under widely different physiological conditions, hæmoglobin being generated during systemic rest and chlorophyll being the product of chemical activity having a complicated dependence on light.

The day curve of variation is marked by sub-idiary curves of fall and rise due to the digestion and absorption of food and by a steep decline which marks the last third of the waking hours. The data obtained before breakfast and lunch are, as a rule, of nearly equal value.

Periodical variations.—The morning (fasting) observations, taken at a time when the blood is least influenced by food, fluids, and work, show that variations are apparent from day to day, from week to week, and from month to month. The average daily, weekly, and monthly variations in corpuscles and hæmoglobin are close upon 3, 2, and 2 per cent. respectively. The weekly and monthly corpuscle value during the past three months has in both subjects steadily risen, especially in subject A.; but it is doubted if the data furnished by him in regard to variations in periods extending beyond one day are to be relied upon, for before his remarkable rise in corpuscle value took place a trace of lead was detected in the drinking-water, although he afforded no signs whatever of lead poisoning. This leads me to remark that the extended use of hæmometric observation during last summer enabled me to detect several cases of lead poisoning which had escaped ordinary recognition; and in every one of these cases the source of the poisoning was discovered. The consecutive observations extending over seven months do not provide data sufficiently extended to enable any reliable conclusion to be formed as to the occurrence of cyclical or seasonal changes in the blood. In A.'s weekly chart of hæmoglobin there are apparent six very regular and pronounced rises and falls, which point to periodicity in the formation and destruction of hæmoglobin. This may, however, be merely accidental: and no such cyclical variation appears in the chart of the older subject, B. Menstruation has not yet been sufficiently observed from this standpoint to warrant any definite statement of results.

Variations in the corpuscles, hæmoglobin, and corpuscular value in animals.—120 daily observations in dogs and rabbits have shown that the daily variations of the blood in them are quite as great as in man: even though these animals were leading the quiet and unvaried life of laboratory confinement. This fact derived from the rabbit is instructive: for the blood in this animal being taken direct from a vein (of the ear) shows that the observed variations are due to actual changes in the blood itself and cannot be ascribed to differences in the amount of lymph which may be stored in the tissues.

[20] Journal of Physiology, vol. viii.

[21] According to Schunck and Marchlewski the anhydride of hæmatoporphyrin, a derivative of hæmoglobin, differs from phylloporphyrin, a derivative of chlorophyll, simply in having three atoms more of oxygen; and, moreover, both these derivatives present the same coloured solution and practically identical absorption spectra. "That the two series of derivatives, that of chlorophyll and that of hæmoglobin, each playing an important part in the vegetable and animal organism respectively, should so closely touch at one point is certainly a remarkable circumstance. In another respect the two series seem to be related. It is well known that the colouring matter of the blood is a derivative of pyrrol. This appears to be the case with chlorophyll also."—Contribution to the Chemistry of Chlorophyll, No. 7, Proceedings of the Royal Society, January, 1896.

The Ingleby Lectures

ON THE

MECHANISM OF BINOCULAR VISION AND THE CAUSES OF STRABISMUS.

Delivered at Mason College, Birmingham, on June 10th and 17th, 1896,

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LECTURE I.

GENTLEMEN,—The term "strabismus"—or, in plain English, "squint"—denotes that condition in which a person looks straight with one eye at the object at which he wishes to look, while the other eye turns in some other direction. Used broadly it covers deviations of the eye of many kinds arising from many causes. In studying the causes we have to look beyond the mechanism of the orbit to the subtler mechanism of the brain; to take into account the influence of hereditary and congenital peculiarities as well as that of accident and disease of many kinds, and especially to regard the process of natural education by which the rudimentary faculties of the newborn child are gradually brought to perfection. The subject, therefore, though belonging specially to ophthalmology, has many points of contact with other branches of medicine and particularly with the diseases of children, and its discussion will not be entirely foreign, I think, to the purpose which the generous founder of the Ingleby Lectureship had in view.

Strabismus involves two disadvantages—disfigurement and disability. Facial expression depends much upon the action of the eyes. We establish a complete sense of mutual understanding and sympathy with another person only when our own, while the other wanders off elsewhere, the sense of reciprocity is imperfect. But there is no need to insist on this; caricaturists and writers of fiction have done so too much already and have often associated obliquity of the eye with obliquity of the morals, for which there is no justification whatever. Still, it is right to say that those who through indifference allow a child to grow up with a squint which might have been avoided are handicapping him heavily in the race of life. I have heard of one case only, related to me by Mr. Bickerton, in which a squint was an advantage. A low comedian with an extreme divergent strabismus applied to him for treatment and was cured by operation. Not long afterwards he came back to say that the loss of his squint had proved a great misfortune, for whereas formerly his mere appearance on the stage would always provoke a laugh he had now to work hard even to raise a smile. But strabismus is not merely a matter of appearance. Every deviation of the eye, however slight, involves a loss of true binocular vision, and it is in this complex disturbance of function that the chief interest of

the subject lies. To-day I shall ask you to consider the mechanism on which normal binocular vision depends—not its details, but its general arrangement and purpose. In my second lecture I shall attempt to point out the various ways in which this mechanism may be disturbed.

Speaking broadly, and disregarding for the moment the functions of the cerebellum, we may say that the organs through which we deal with external objects are controlled on each side of the body by the opposite side of the brain. For example, the right hand moves and feels, and the right ear hears, by virtue of its connexion with the left half of the brain. How is it with the visual apparatus? Let us

FIG. 1.

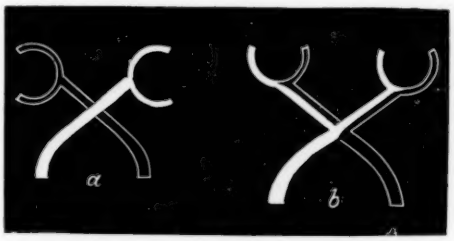


Diagram showing arrangement of retinæ and optic nerves in (*a*) fish and (*b*) man. The solid white portion is the visual organ for the right side.

look for a moment lower down in the animal scale. In the cod-fish the eyes look directly outwards to the right and to the left. (Fig. 1, *a*.) The right eye is the visual organ for the right side, the left for the left, and the optic nerve from each passes across entire to the opposite side of the brain—a complete analogy with the hand and ear in man. As we ascend the animal scale we find the eyes coming round more

FIG. 2.

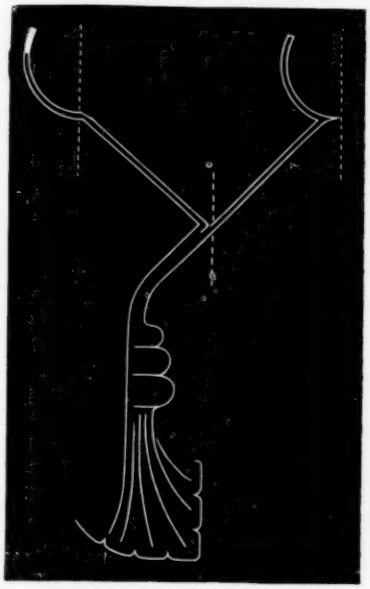
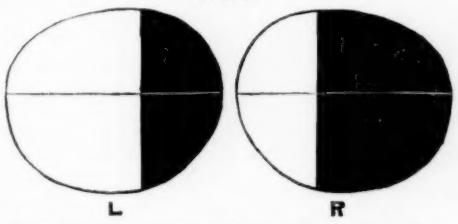


Diagram showing connexion of left half of each retina with lower (basal) and higher (cortical) visual centres.

and more to the front, till in man they look nearly straight forwards. (Fig. 1, *b*.) Each eye sees both to the right and to the left, the left half of each retina receiving the pictures of objects standing to the right and *vice versa*. In man, therefore, the visual organ for the right side is not the right eye but the pair of half eyes which see in that direction, and this compound organ is connected like the right hand and ear with the left side of the brain. This is true not of the retina only, but of the eye muscles as well, as we shall shortly see. The connexion of the eyes with the brain is peculiar, then, if we regard the anatomical arrangement, but considered in relation to function it is similar to that of the other peripheral organs. Bearing this similarity in mind, let us look at the arrangement of the visual apparatus a little more in detail, first the sensory, then the motor portion.

The optic fibres from the left half of each retina join company at the chiasma, constitute the left optic tract, and form various connexions in the left half of the brain. These latter have been studied with infinite pains, but are not yet completely known. This much may be said with certainty: the optic fibres are connected, firstly, with certain lower centres in the basal ganglia (chiefly the external geniculate body, the pulvinar, and the anterior quadrigeminate body) and, secondly, with higher centres in the apex of the occipital lobe. (Fig. 2.) Clinical observations have amply proved that the chief centres for conscious visual perceptions lie in the occipital cortex and that a lesion situated in this region or at any point in the course of the optic fibres between it and the chiasma, causes blindness in the corresponding halves of the two retinæ—i.e., homonymous hemianopia (Fig. 3). I must

FIG. 3.



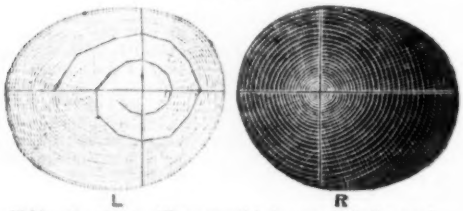
Fields of vision in complete right hemianopia indicating lesion behind commissure on left side.

remind you, however, that according to some authorities certain lesions and disturbances of the brain cause not hemianopia but "crossed amblyopia"—i.e., not half-blindness of each retina but whole blindness of the opposite retina, and in order to explain this they assume that there is on each side of the brain another visual centre which is connected with the entire retina of the opposite eye. Let us glance at the evidence on which this doctrine of crossed amblyopia is based. It is of two kinds relating to lesions of the brain and to functional disturbances respectively. The clinical observations which have been cited to show that a brain lesion has caused blindness in the opposite eye with none in the near eye appear to be inconclusive. Nothing short of an accurate map of both visual fields can be accepted as valid evidence on this point, and this is not forthcoming. Patients suffering from hemianopia are often not aware that both eyes are affected; if they have blindness towards the right they tell us that the right eye is blind, and there can be little doubt that crossed amblyopia has sometimes been registered on a mere statement of this kind when hemianopia was really present. The experimental evidence is mainly that put forward by Professor Ferrier. He found that destruction of the angular gyrus in the monkey caused transient loss of vision in the opposite eye and convinced himself that this was not of hemianopic type. But in judging of this experiment we must remember that even in man the field of vision cannot be accurately mapped without help from the patient, and that in the monkey it can hardly be easier. Moreover, even in man hemianopia blinds a larger area in the opposite eye than in the near eye, for what we call the halves of the retina are not equal halves (Fig. 3), and in the monkey the inequality is presumably somewhat greater still. More important still, other experimenters have failed to produce discoverable blindness by destroying the angular gyrus unless the injury went deep enough to damage the fibres of the optic radiation which lie beneath it, and in that case the resulting blindness appeared to be of hemianopic type.

On the other hand, certain functional disturbances of the hysterical and reflex types are associated in some cases with a loss of vision which is not hemianopic. The field is not divided vertically, but is contracted concentrically all round.

The line which limits it is not sharply defined but uncertain and shifting, sometimes closing in while the patient is under examination, so that as we go round the field twice or more with the perimeter we get a spiral line which constantly approaches the centre. (Fig. 4 L.) This form of amblyopia is

FIG. 4.

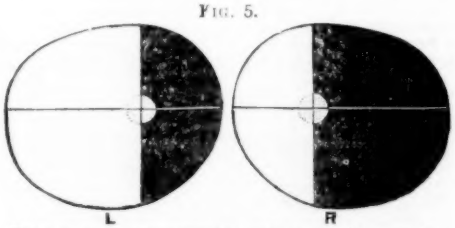


Fields of vision (diagrammatic) in so-called "crossed amblyopia." Variable concentric contraction, unequal in the two eyes. The spiral line (L) shows closing in during examination with the perimeter.

usually attributed to a disturbance in the cortical centres for vision. Now, when the two eyes are equally affected, as they usually are, this explanation involves no difficulty, for it is quite compatible with a semi-decussation of the optic fibres; but when, as happens in certain cases of hysterical hemianæsthesia, one eye is nearly blind while the other shows only a slight peripheral contraction of the field (Fig. 4), it involves the assumption that the whole of each retina is represented in the opposite hemisphere. Hence Charcot's hypothesis of a completed decussation, and the doctrine of crossed amblyopia. But is this amblyopia a direct result of cortical disturbance pure and simple? Is it not perhaps an indirect symptom, a retinal anæsthesia due to vaso-motor disturbance? Looking at the question from the ophthalmic standpoint there are, I think, some grounds for this view. The retina is constructed and nourished in such fashion that a general lowering of its nutrition necessarily leads to contraction of the field of vision. To demonstrate this we have only to press the eyeball moderately with the finger so as to retard, without arresting, the internal circulation; we get a lowered vision and a contracted field which much resemble hysterical amblyopia. Clinically we sometimes see cases in which similar symptoms are clearly due to a reflex disturbance of the circulation in the eye; the blindness usually passes off, leaving the vision normal, but occasionally, after several transient attacks, it remains permanent and we then find the signs of arrested circulation in the retinal artery. I have published a series of such cases; allow me to refer to one. A young married woman suffered many attacks of transient blindness, sometimes with fainting, always with a tendency to faint. They were brought on sometimes by hurry and agitation, as in catching a train, but most distinctly by the use of a vaginal syringe. There was, she thought, a tender spot which the syringe sometimes touched, and whenever this happened she felt faint and the sight failed. From one of these attacks of transient blindness the left eye did not recover; it remained permanently dark except just at the macula, and presented the usual signs of arrested circulation in the retinal artery. Here was certainly a reflex disturbance of the intra-ocular circulation, combined probably with a condition of depraved blood. The other eye remained amblyopic and sometimes went dark for an hour together; it was obviously in peril. The patient was placed under the care of Dr. Malins, who found double pyo-salpinx and removed the ovaries and tubes. The remaining eye then quickly and permanently recovered. This was in 1883, and I heard not many months ago that the good result is still maintained.[1] Taking all these facts into consideration, it seems possible that the so-called crossed amblyopia may prove to be a reflex retinal phenomenon rather than a sign of disturbance in the cerebral centres for vision.

I will venture to carry this heresy a step further. In hemianopia the line which divides the blind from the seeing area sometimes passes to one side of the fixation point instead of through it, so that the patient, to his great advantage, retains his sight in the whole of the macular region instead of in one-half only. To explain this imperfect bisection it has been assumed that the whole of the macula is represented in each hemisphere, so that its activity is maintained by either in spite of a lesion in the other. This is the doctrine of crossed amblyopia in a different and less complete form; but surely if the whole of the macular region in each eye, as distinguished from the rest of the retina, is represented in each hemisphere, it ought in hemianopia to be spared in a symmetrical form and it ought to be lowered in sensibility throughout by a lesion of either hemisphere (Fig. 5); but

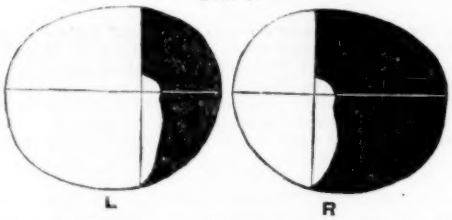
FIG. 5.



Fields of vision (diagrammatic) such as should occur in hemianopia if the hypothesis of double representation of the macula were true.

such fields are not found. The dividing line, when it spares the macula, usually takes an irregular direction and spares a portion of the periphery as well (Fig. 6.) An incomplete hemianopia like this would seem rather to indicate that the lesion has fortunately spared some portion of the visual fibres or cortex on its own side of the brain, and it is by no

FIG. 6.



Fields of vision such as actually occur, presumably when certain fibres on the same side as the lesion are spared.

means unlikely that the macular fibres have some advantage in this respect—that they escape when other less important fibres suffer. They are very numerous in proportion to the area which they supply, they are functionally the most active, and they are the best protected by their central position in the tracts as well as in the optic nerves.

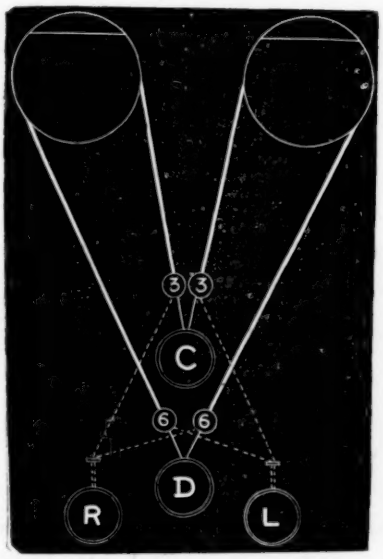
At present, then, we may, I think, regard the doctrine of crossed amblyopia as unproved, and we may hope that those bewildering diagrams in the text books which show the fibres from one retina, first making a semi-decussation at the chiasma and then changing their minds and re-uniting in a common centre in the opposite hemisphere, will turn out to superfluous.

The motor mechanism of the eyes consists essentially of three parts: the muscles, the nerves which convey impulses to them, and the brain centres which issue the impulses. Every movement, except inward and outward movements in the horizontal plane, requires the combined action of two or more muscles for each eye, and every impulse to one eye is accompanied by a simultaneous impulse to the other; it is evident, therefore, that the guidance of the two eyes from one point to another in the field of vision is a highly complex act. The simple sideways turning of the eyes has been likened to the driving of a pair of horses, and if we imagine the coachman to be supplied with certain extra reins so coupled together that he can at pleasure turn his horses' heads not merely to right or left, but upwards, downwards, towards each other, or away from each other, and if we imagine him to have hands enough and skill enough to make every possible combination of these movements with hairbreadth precision, we can picture the way in which the brain centres control the eyes through the three pairs of nerves which actuate the muscles. As regards movements in the horizontal plane their action may be illustrated by this model (Fig. 7). Please observe that it does not pretend to represent anatomical structure—that is an extremely intricate matter; it is

[1] Ophthalmic Review, 1884, pp. 2 and 144.

merely a working diagram to demonstrate the principle of bilateral coördination. The centre for convergence (C) turns both eyes towards the median line; that for divergence (D) away from the median line; the conjugate centre on the left side (R) turns both eyes to the right, that on the right (L) both eyes to the left. For different purposes the same muscles are actuated by different centres, and are differently associated one with another. In every case the impulse is bilateral—i.e., is issued to the two eyes simultaneously. Moreover, the impulses here illustrated are associated more or less closely with others not shown in the model; convergence is associated with accommodation and contraction of the pupils, and to some extent with movement of both eyes downwards; divergence with upward movements of the eyes and lids; conjugate lateral movements to some extent with lateral rotation of the head. That these coördinated impulses

FIG. 7.



Model illustrating bilateral motor impulses to the eyes. 3, 3, and 6, 6, primary nuclei of the third and sixth nerves; C, centre for convergence; D, for divergence; R, for conjugate movement to the right; and L, to the left.

spring from distinct foci or centres in the brain-substance is no longer open to question, for a lesion at a certain spot will abolish one form of bilateral movement and leave another intact, so that a given muscle, required in both, is at one moment paralysed, at another active, according to the nature of the attempted movement. Moreover, the experimental physiologist can call forth one or other of these compound movements by placing his electrode on one or other spot in the brain.

As regards the exact positions of the various centres I will not attempt to speak. I will only remind you that the motor centres like the visual centres are of two or more grades, the lower being in the neighbourhood of the corpora quadrigemina, and chiefly in the grey matter which forms the floor of the third and fourth ventricles, the higher in the cortex of the frontal lobe. The lower appear chiefly to supply the motive force, the higher to exercise conscious control.[2] The sensory and the motor portions of the visual apparatus interact upon each other. No mechanism however delicate could turn the eyes swiftly and surely from one point to another without precise information as to the position of the point at which it is to aim. Here, as elsewhere, throughout the body, sensation guides movement through channels connecting the sensory with the motor centres. Experiments have proved the existence of such channels. The electrode applied to a certain point in the visual area of the cortex induces eye-movements in a certain direction: it excites, presumably, a visual impression, which, when conveyed to the motor centres, causes them to turn the eyes toward the point in space from which that impression would normally be received. In this way the actual position in which the retinal picture is reproduced in the occipital cortex has been to some extent determined.

Such, very roughly sketched, is the mechanism by means of which we enjoy the faculty of binocular vision. Do we bring it with us into the world ready made, or do we make it each one for himself? The question has been much debated and has an intimate bearing on the causation of strabismus. Unquestionably, the infant is born with the visual machinery, including its chief coördinations ready made, but only in the rough; if he is to enjoy the use of it he must complete it and make the fine adjustments for himself, and he must do this while the structure is still plastic and in the act of growth. Any interference with the education of the eyes in very early life is apt to leave a permanent disability. Let me put before you a few well-observed facts as to the development of vision in infancy. The newborn child[3] is sensitive to light at once, or at latest within a few hours; the pupils respond to light, and both respond when it falls on one eye only; the reflex closure of the lids under the sudden afflux of light is present also. The conscious perception of objects and the response thereto, e.g., the closure of the lids when an object suddenly approaches the eye, is absent during the first few weeks. The first movements of the eyes, like those of the limbs, are purposeless; they occur sleeping as well as waking and have no relation to external objects. They are often clearly of the bilateral associated kind: both eyes turn to one side, or both turn inwards, assuming a position of excessive convergence which is indistinguishable from squint. They are often asymmetrical, one eye making larger excursions than the other, or remaining at rest while the other moves. Observe, however, that this asymmetry does not prove absence or abeyance of bilateral coördination. Such movements may be, and frequently are, produced in ourselves by the combined action of two bilateral impulses. For example, I am now looking with both eyes at a distant point. I place a finger in line between this point and the right eye and then look at it with both. What happens? The right eye remains directed as before, the left turns inwards, the movement is asymmetrical, but it is due to the simultaneous action of the centre for convergence, and the conjugate centre for movement towards the right. Such movements in the infant show not want of coördinating mechanism but want of purpose; the lower centres are acting uncontrolled by conscious perception in the higher. The movements in which absolute coördination is certainly wanting are just those in which it remains incomplete throughout life—viz., the vertical movements of the eyes and eyelids. We can most of us even in adult life contrive on occasion to wink with one eye only, and many can turn one eye upwards or downwards a little more than the other in order to neutralise the effect of a weak prism. Soon the infant begins to perceive the pictures on his retina, and may as early as the fourth week begin to follow the movement of a bright object before his face. Purposive movements in search of objects lying to one side begin a little later. Horizontal movements, which are stronger throughout life than the vertical, are learned first: a child of fourteen weeks has been seen to follow the oscillations of a clock pendulum, but not till near the end of his first year does he follow the objects which he drops from his hand to the floor. Voluntary convergence, as in watching the approach of an object towards the face, appears about the third month accompanied by first experiments in the art of accommodating. A knowledge of distance is learned gradually after countless experiments in grasping at things which are out of reach. Recognition of objects also is gradually learned; of faces about the sixth month; of bottles, cups, spoons, and so forth about the ninth; by the twelfth month the child watches all that goes on in his neighbourhood. These observations show that we owe the faculty of binocular vision, as we owe some still higher faculties, partly to inheritance and partly to our own diligent use of what we inherit.

For what purpose are the peripheral organs of vision duplicated in the remarkable manner we have been considering? Why not one eye for the right side and one for the left, as in the fish? or, granting that an intelligent being does well to look forwards rather than sideways, why not one

[2] See chapter on Automatism and Control, in Lloyd Morgan's Introduction to Comparative Psychology. 1894.

[3] See Die Seele des Kindes, by W. Preyer, Jena, 1884.

large eye in the middle of the forehead like the Cyclops? The purpose is that we may look at every object from two points of view and thereby comprehend it better; in other words, that the brain shall receive two different pictures of the object and yet shall receive them in the same place, so that it may easily blend and yet compare them—fuse and yet differentiate them. This process is learned in early infancy, and when learned is performed almost unconsciously; we hardly know that the mental picture is a blend of two retinal pictures, or that the latter differ from each other. The fusion of the two pictures is promoted by the special sensitiveness of the macula. The infant soon learns that he sees an object best when it is pictured simultaneously on the two maculæ and he directs his eyes accordingly, bringing an identical point in each picture precisely to the central point of each macula. So precise does this fixation become that a good observer has little difficulty in consciously directing his eyes to either of two adjacent points, even where these are so small and so close together as to be only just distinguishable. The fusion of the two pictures as regards their outlying parts is a less simple matter. If they were exactly similar, like two prints from one negative, they would, of course, coincide throughout, but they are not so; they are two photographs taken from different points of view, and it is precisely their difference which gives the compound mental picture its special value. This is well known to those who are familiar with the use of the stereoscope. Here is a very simple illustration. I look at this pencil while holding it a little to the right of the middle line and pointing towards me. The left eye sees it more sideways, the right more endways, than its fellow. The two retinal pictures may therefore be represented by two lines of unequal length (Fig. 8). How can two pictures so

FIG. 8.

Dissimilar retinal pictures of a rod held before the eyes to the right of the middle line and pointing forwards.

different be fused, and what sort of mental picture can they produce? Place them in the stereoscope so that the right eye receives the one, the left eye the other, and the question is answered. For a moment both are seen in confusion; then suddenly they spring together, as it were, and the confusion ceases; experience tells us that their discrepancy could only be produced by an object placed as the pencil was placed, and we see, not a long line or a short line on the flat paper, but a single line in perspective. In forming our judgment as to the position of the pencil, the motor apparatus of the eyes assists the sensory; our eyes travel from one end to the other, and in so doing the left makes a greater excursion than the right; this difference in the movements of the two eyes confirms the knowledge derived from the difference between the two retinal pictures.[6] In blending the constantly varying pictures which the two eyes receive we habitually disregard those portions whose discrepancy would otherwise confuse us. For example, I hold a finger at twelve inches from my face and another at half that distance; now, while I look at the further one, the nearer, if noticed carefully, is seen double, and *vice versâ*. Physiological double images of this kind are constantly before our eyes, they are the discrepant portions of the two retinal pictures; usually they are unnoticed, but they are not unseen and they are not unused. They largely subserve our perceptions of distance and perspective. Here is a beautiful illustration of the value of unrecognised double images. The box (Fig. 9) represents Hering's drop test in a slightly altered shape. Across it, near the far end, is stretched a white thread with a knot at its middle point. I look into the box with both eyes open and fix my attention on the knot. My assistant drops a white bean through the box, either in front of, or behind, the thread. I can say with certainty every time whether it passes in front or behind. Now, if I shut one eye I see the bean pass as before, but I have no idea whether it passes in front or behind. When both eyes are used, the bean, being nearer or further away than the point at which I am looking, is seen double; if it is nearer the image belonging to the right eye stands to the left, and *vice versâ*—in other words, the images are crossed; if it is further they are not crossed. Now please observe that in this experiment one is not conscious of seeing double, yet the two images are not only received by the percipient

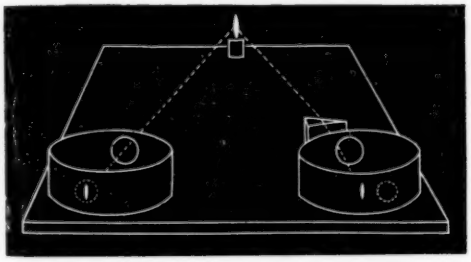
FIG. 9.

A convenient form of Hering's drop test for the presence of binocular vision.

centres but are differentiated the right from the left, and on the information thus obtained one judges correctly as to the position of the bean during its momentary transit through the box. This is a very delicate test for the presence or absence of true binocular vision.

And now, lest it should be supposed that these phenomena of single and double vision, though interesting as questions of physiological optics, have no bearing on practical work, I will conclude with an application and an actual case. The model (Fig. 10) represents the two eyes and the object at

FIG. 10.



Model showing displacement of retinal image by means of a prism.

which they look—a lighted candle. Both eyes being properly directed the candle is pictured on the macula in each. If either eye were to deviate the picture in it would be displaced from the macula and the patient would see double. This he habitually avoids. Now we can displace the image and produce double vision artificially by placing a prism before one eye. What happens then? The patient instinctively moves his eye in order to bring the macula to the image and get rid of the double vision. He does this involuntarily or even against his will; he cannot help doing it. This is a useful test for sham blindness. If the eye moves behind the prism and again when the prism is removed it is no use his telling us that it is blind. A few months ago a prisoner awaiting trial for burglary with violence awoke one morning blind in both eyes—so he said. The prison surgeon had no doubt that he was shamming, but wanted positive evidence one way or the other, and we examined him together. The man declared himself to be quite dark in both eyes and acted the part of a blind man fairly well, overdoing it a little. The pupils were already under atropine and could therefore give no evidence as to the light reflex. A lighted candle was placed before him in a dark room. He was not required to "look" at the candle, being nominally blind, but the candle was placed about where he appeared to be looking. A prism was then placed before one eye, its base inwards; instantly the eye moved outwards. The prism was removed and the eye moved inwards. The man was told that his blindness would certainly disappear as quickly as it came, and he probably understood that the fraud would get him into more trouble if persevered in. His sight was soon restored. Now, if this man could have carried his blindness into the dock a merciful judge and jury would not improbably have felt that a higher tribunal had already visited him with a heavy punishment, or at least that he was

[6] See Javal, Binocular Vision in its relation to Strabismus. Helmholtz's Festschrift, abstract in Ophthalmic Review, vol. xi., October, 1892.

incapacitated for further crime, and have dealt leniently with him. As a matter of fact, he was a particularly daring and dangerous criminal, and had attempted, during a former imprisonment the life of the prison surgeon. He received a long sentence. This case, of course, was somewhat exceptional, but the question whether the two retinal pictures are properly blended in the brain arises not only in connexion with feigned blindness but in many common conditions. In my next lecture I shall have to point out its importance in relation to the causes of strabismus.

Birmingham.

ABSTRACT OF

A Clinical Lecture

ON

TWO UNUSUAL CASES OF HERNIA.

Delivered at King's College Hospital on Jan. 13th, 1896,

BY WILLIAM ROSE, M.B., B.S. LOND., F.R.C.S. ENG.,

SENIOR SURGEON TO KING'S COLLEGE HOSPITAL AND PROFESSOR OF CLINICAL SURGERY IN KING'S COLLEGE, LONDON.

GENTLEMEN,—There are at present in the hospital in my wards two unusual cases of hernia which are worthy of special mention from a clinical standpoint in that they both illustrate the fact that nature is occasionally able to effect a cure without the intervention of surgery. They are exceptional cases and not typical either in their clinical history or in the line of treatment adopted. Although the results have been satisfactory, yet I shall conclusively prove to you that these patients have not attained their present favourable conditions without considerable risk to their lives. In the former of these an irreducible femoral epiplocele became strangulated, and when seen and admitted to hospital gangrene of the hernial contents and adjacent skin was present with marked toxæmic symptoms, whilst in the latter a more chronic process of inflammation had been going on for years between the sac wall and an irreducible portion of omentum surrounding a prolapsed and elongated vermiform appendix, leading finally to the shutting off of these structures from the general peritoneal cavity. In one, then, the process has been acute and the danger great, and in the other chronic, but the risk, though less, has still been considerable.

CASE 1.—A woman aged fifty years was admitted to the Wigram Ward of King's College Hospital on Jan. 3rd, 1896. Three weeks before admission she first noticed a lump in the groin on the right side as the result of a severe attack of vomiting brought on by excessive drinking. She continued to work, however, till two days before admission, when the swelling became larger, much more painful, and the skin over it was red and tender. On the following day it burst, and gave exit to a quantity of foul-smelling fluid, which the patient described as like stinking onions. On admission she presented symptoms of toxæmia, an anxious countenance, a dry and furred tongue, and a small, rather hard pulse. The temperature was normal. There was nausea, but no vomiting, and, indeed, she stated that she had not vomited since the swelling burst. Absolute constipation had been present for some days. In the right groin a little above the saphenous opening there was a large black slough protruding through an oval aperture in the skin about two inches in diameter. It had the characteristic appearance of dead omental tissue, and from its interstices a quantity of offensive sero-pus could be squeezed out. There was no appearance of fæcal escape and no general abdominal tension or tenderness. The soft parts in the neighbourhood of the wound were red and œdematous. From the absence of any of the graver symptoms a diagnosis of strangulated omental hernia was made. The wound was dusted over with iodoform and charcoal poultices applied. Fluid diet in small quantities was ordered, and the bowels were not opened until the third day, and then by an enema. The patient made steady progress, the sloughs separating, and the wound gradually healing.

The chief points of importance to be noted in this case are: (*a*) the modified symptoms which are exhibited when omentum alone is strangulated and the bowel not involved; (*b*) the localisation of the destructive and inflammatory process to the hernial protrusion and parts immediately around; (*c*) the source and nature of the septic process in the omentum; and (*d*) the treatment of the case.

Unquestionably, the occurrence of a pure strangulated epiplocele is rare, and your text-books give but little information on the subject, the symptoms ascribed to this condition being mainly those which arise when the gut is also involved. Vomiting commencing with the contents of the stomach and gradually becoming fæcal, abdominal distension, pain radiating from the umbilicus, a quick and so-called wiry pulse, an anxious countenance, a dorsal decubitus with the thighs and legs flexed are the cardinal features of such a case. Constipation may or may not exist. Such conditions are considerably modified, however, and some of them absent when omentum alone is involved. The vomiting may be slight in amount and is seldom persistent, rarely fæcal. Peristalsis, although somewhat hampered, is not arrested, consequently constipation need not be present. In short, all the symptoms are of a milder type, and hence it frequently happens that the existence of strangulated omentum is not recognised for some days after its incidence, particularly in women where there is a natural disinclination to mention anything that would necessitate an examination of the groins. It is, therefore, very important to put the question very decidedly as to the existence of any unusual or recently formed swelling in this region or at the umbilicus. Again, it must not be forgotten that an irreducible omental hernia may at any moment become complicated by the intrusion into the sac of a knuckle of intestine, which not only becomes itself strangled, but also determines the occurrence of similar changes in the omentum, giving rise then to all the characteristic signs of acute obstruction. Moreover, it not infrequently happens that a similar train of symptoms may be induced when a large amount of omentum becomes protruded and adherent or strangled, causing at the same time excessive traction and angular kinking of the large bowel, probably at the most fixed portion—viz., the splenic flexure.

The local signs of a strangled epiplocele differ in character from those which obtain when bowel is involved. In the latter a rounded, tense, tender swelling can usually be felt, devoid of impulse and irreducible. On the other hand, the omental swelling is soft and doughy, but painful and irreducible. The amount of fluid in the sac varies considerably, being usually scanty. Such a swelling in the femoral region has frequently been mistaken for an inflamed lymphatic gland or an accumulation of fat, but the fixed base and the inability to define the margins of the saphenous opening should prevent a mistake in diagnosis, and taken with the other symptoms should suffice to induce the surgeon to make an exploratory incision. When the patient whose case we are now reviewing first came to the hospital these earlier and more typical phenomena had been superseded by those of local inflammation and gangrene, the result of bacterial infection. It was abundantly evident from an examination of the surrounding parts how virulent was the local action which was here at work, and yet it is instructive to note how rapidly and efficiently nature had succeeded in sealing off the general peritoneal cavity by a plastic effusion, which was of sufficient vitality to become rapidly vascularised and so withstand the extension of the destructive process.

As to the source of this infection there is room for speculation. It is certain that the putrefactive changes commenced from within and spread outwards; but the mere fact of omentum being strangled does not in itself determine a putrefactive change, as is often exemplified in the operation for the radical cure of hernia, where we are in the habit of returning large masses of ligatured omentum without risk. One is, therefore, driven to the conclusion that an auto-infection of some kind or other must have occurred in this case, probably due to the migration of bacilli from the neighbouring coils of gut, either kinked or restricted in movement by the traction of the incarcerated omentum.

In deciding as to the immediate treatment to be adopted one naturally asked the question whether or not any strangulation of the intestine was present. The local and general conditions of the woman gave a decided negative to this query. Granted that no portion of gut was implicated, it

was obviously undesirable to interfere with the process of nature beyond assisting in the removal of the necrotic tissue, for any incision made with a view of relieving the constriction would necessarily open up the barrier existing between the healthy and infected regions, thereby exposing the patient to the risk of general peritonitis, whereas, if the necrotic tissue was allowed to separate or was scraped away, every care being taken to disinfect and purify the locality, one might reasonably anticipate a favourable issue, even if it involved the fixation of the omental stump to the abdominal parietes. If after the wound has healed the patient should complain of pain and threatening obstruction from restricted peristalsis, an operation for the relief of the deep adhesions can be resorted to under more favourable auspices.

CASE 2.—A woman aged sixty-two years was admitted to the Wigram Ward on Jan. 2nd, 1896, suffering from a large irreducible femoral hernia on the right side extending upwards and outwards over Poupart's ligament. The origin of this protrusion dated back to a confinement thirty-eight years ago. She has occasionally worn a truss, but at variable intervals has had severe attacks of pain localised to the hernial sac and evidently due to a limited peritonitis. The tumour has increased in size considerably during the last seven or eight months. On admission it was hard and irreducible, but not tender to the touch. She has also suffered much from general dyspepsia and attacks of vomiting. On operation I found adherent to the sac a large mass of omental tissue which had undergone a sclerotic change as the result of the repeated attacks of inflammation; it was completely shut off from the general peritoneal cavity. Running through the centre was a tubular body, which proved on dissection to be a long vermiform appendix. This and the dense mass of omentum were removed on a level with the femoral opening and the wound healed in a few days.

In comparing this case with the other I would again remind you of what I stated at the beginning of the lecture—viz., that nature had here effected a cure before I interfered, and that the operation merely consisted in removing a superfluous mass of changed omentum and the appendix, which had long since been isolated from the abdominal cavity. Indeed, so firm was the plugging of the femoral canal that it was not necessary to disturb it in any way. At the same time it must be evident to you all that this woman was for a long time in very considerable danger with a prolapsed vermiform appendix in addition to the omental protrusion. At any moment a coil of gut might have passed into the sac and led to strangulation, or a similar condition of acute obstruction might have been induced by kinking of the gut from dragging or twisting of the omental connexions. Again, the prolapsed appendix might have become acutely inflamed, although this condition is extremely rare.

The presence of the vermiform appendix in a hernial sac is not a common occurrence, although not a few cases have been recorded. Personally, although I have operated on hundreds of cases of hernia I have not met with this condition more than half a dozen times. Some years ago I was called in by Mr. Alfred J. Bell of St. John's Wood to operate on an old lady over eighty years of age who was suffering from acute strangulated femoral hernia, and I there found the appendix in the sac in addition to a coil of intestine. The removal of the former and the usual operation of radical cure were followed by an uneventful recovery. No doubt in this latter case the appendix had been the first tenant of the hernial sac and had paved the way for a prolapse of the bowel, which had subsequently become strangulated. In the former case no coil of bowel happened to become involved.

In conclusion, I must repeat that these two cases are of a very exceptional character and must not be looked upon as in any way typical of the ordinary run of cases of incarcerated or strangulated hernia with which you will have to deal in your practice.

WIGAN MEDICAL SOCIETY.—The ordinary meeting of this society was held on June 4th, Mr. C. R. Graham, President, being in the chair.—Dr. Judson S. Bury, assistant physician to the Manchester Royal Infirmary, read a paper on the Diagnosis of Functional from Organic Disease of the Nervous System.—A discussion followed, in which Mr. Hugh E. Jones, Mr. Cowan, Dr. R. P. White, Mr. Benson, and the President took part.—A cordial vote of thanks was passed to Dr. Bury for his able paper.—Dr. Bury replied.

A CASE OF CONFLUENT SMALL-POX IN A LASCAR.

BY ALEXANDER MACPHAIL, M.B., C.M. GLASG.,
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THE following notes, chart, and drawings form the record of a case of confluent small-pox which ran its course to a fatal issue on the high seas between the ports of Colombo and Suez, and are mainly interesting from the fact that a complete record of such a case is not often obtainable, the patient having been one of a Lascar crew. A secondary interest attaches to the record in that I was at the time surgeon on board the ss. *Clan Mackenzie*, and had not previously seen a case of small-pox, so that the diagnosis had to be made and the case conducted without such aid as anyone familiar with the disease might derive from early signs; and it was only determined after a careful study of the notes taken from day to day, which are given below, together with some remarks on the chief points of interest.

On Sept. 18th, 1894, a man aged thirty-five years first complained of headache and pains in the back and limbs. The skin was hot and dry. The temperature was scarcely febrile in the morning, but reached 101°F. by the evening. He was given quinine in ten-grain doses. On the 19th the temperature was steadily rising; there was profuse sweating. The pains were general and more severe. The patient was also suffering from depression and sleeplessness. On the 20th the fever was more marked and the pain less. There was severe vomiting shortly after a dose of quinine in the morning, and phenacetin was substituted. The vomiting reappeared several times in the course of a few hours. On the 21st, although there were symptoms of greater ease, the morning temperature rose still higher, with a fall of 2° after exhibition of phenacetin again at midday, when the patient drew attention to a few spots on his forehead, like ordinary pimples, but hard, while a few similar spots were felt on the right cheek. These were not regarded as of much importance, and no rash could be seen; but on the evidence of continued pyrexia and inexplicable fits of vomiting the patient was isolated, disinfectant measures were adopted, and the temperature was taken more frequently. On the 22nd distinct papules appeared all over the body, with very slight signs of congestion, but in almost all cases giving a "shotty" feeling to the touch. The temperature reached a crisis at 104·4° in the afternoon and fell again towards evening. Isolation and disinfectant measures were more strictly enforced on the first suspicion of small-pox. On the 23rd there was a decided lysis of the temperature almost to normal, with slight exacerbation in the afternoon. The symptoms were much relieved, and the pulse, though not notably accelerated previously, became almost normal in number and fulness of beat. The eruption was still nondescript, some of the spots showing an advance towards breaking and scabbing and others to surface blackening. On the 24th the temperature was still oscillating at the lowest febrile degree. The individual spots were more prominent, broader, and flat, and dull chocolate in colour. (See Fig. 1.) Sleeplessness was also present for which bromide of potassium was exhibited. On the 25th the morning temperature was normal, but febrile again at night. Delirium was very marked during the night, the eruption assuming the above-mentioned characters all over. Acupuncture of the flat elevations revealed serous fluid contents. There was slight confluence on the forehead and cheeks, the lips and tongue were swollen and marked by distinct papules, and one or two clear vesicles were seen on the sides of the tongue. On the 26th the temperature was oscillating. There were a few distinct pustules on the face and in the fold of the groin. The whole face was much swollen and the pulse became rapid and thin. On the 27th the temperature was increasingly febrile and the pulse was 112, weak, and dicrotic. Noisy and incessant delirium was present, the spots all over the body becoming pustular (Fig. 2). The eyelids were matted with purulent matter and there was a discharge from the nose. The patient showed great thirst. The urine was very concentrated. Zinc powder and perchloride of mercury lotion were applied externally, while digitalis and stimulant were given internally. On the 28th all the symptoms were less severe in the morning and throughout the day; the pulse, although weak, was less

rapid; the temperature was 99·8° in the morning, rising again during the afternoon; the delirium was gone. Death took place unexpectedly at night, the patient having spoken cheerily to his comrades through the partitions a few minutes previously.

Remarks.—The duration of the period of incubation can be very definitely fixed, as the patient had been, on his own information, in direct contact with a case of small-pox on Sept. 5th and 6th, his own initial symptoms appearing on the morning of Sept. 18th. During this time he had never complained of any indisposition, although the captain had remarked on a drowsiness and inactivity quite unusual to the patient. The first complaint was made in company with three other native servants who had got a wetting the previous night and had thereafter gone to sleep for a few hours on the saloon floor in order to be at hand when the ship arrived at Colombo. They all complained of symptoms which at once suggested the early stages of an attack of ague—viz., headache, pains in the back and lower limbs, and hot, dry skin, the temperature, though above normal, in no case being febrile as yet. Malarial fever, or simply "fever," as it is called by them, is always smouldering in a Lascar crew, and as similar causes had accounted for several well-marked cases in the previous voyage, the diagnosis of malarial fever was considered secure and the routine treatment—by quinine sulphate in ten-grain doses every few hours—was adopted. The relief following the exhibition of quinine in all the cases, with this single exception, seemed to justify this diagnosis, and it was fully anticipated that this case too would soon subside under its influence. On the contrary, the temperature curve was still rising (although unattended by any new symptom) on the second day, and continued so till the morning of the third day, when severe vomiting and retching set in. This was at first attributed to the usual dose of quinine, but in spite of phenacetin having been substituted it came on several times during the day and was seemingly independent of any stomach irritation, there being only a slight emesis of bile-coloured fluid, pointing rather to a constitutional cause, associated no doubt with the invasion of the disease. The temperature chart gradually evolved a curve resembling that typical of small-pox, a somewhat abrupt rise from normal to 104·4°, which crisis was reached on the fifth day of illness and one day after the first appearance of the exanthem. This was interrupted on two occasions by phenacetin, which produced a transitory fall. Coincident with the outbreak of the papules all over the body a distinct lysis set in, the temperature becoming almost subfebrile in the course of twenty-four hours, and, oscillating there for two days, on the morning of the third day reached normal. The secondary curve, which began to develop on the same day, although intermittent, showed a steady rise, reflecting the process of pustulation and consequent blood-poisoning. The pulse in the earlier stages presented no feature out of proportion to the degree of fever present, and only when the secondary fever set in was there any notable feature; then its rate increased as its strength diminished, its character becoming distinctly thready. These qualities were markedly changed by the administration of two doses of fifteen minims each of tincture of digitalis and some stimulant. From an early date the exanthem was regarded as significant of a specific fever, but, in the absence of previous experience of small-pox, was not for some time confidently held to indicate the presence of this disease. In the early stage the spots were distinctly "shotty," but might have passed except for the absence of a distinct "core" as ordinary pimples. The rapidly increasing area over which they began to appear and their transition into flat, hard elevations, mostly without any manifest congestion, led to a cross-examination of the patient as to his ever having seen a similar eruption. He said he had, and was sure that it was a certain disease common among natives of India, to which he gave the name "hoom," but which I have been unable to identify farther than that it is sometimes used to describe chicken-pox and is more loosely applied to many skin affections. When asked if he was familiar with small-pox the important fact was elicited that he had been staying for a few days, when the ship was lying at Calcutta, with an uncle stricken with small-pox there, and, in entire ignorance of any theory of infection, had been in constant communication with him as with any ordinary invalid. Though important this was not regarded as conclusive proof, for until it had assumed the characters shown in Fig. 1 the eruption did not seem to conform to the usual description of a small-pox vesicle; indeed, it did not suggest the presence of fluid.

FIG. 1.

Fifth day of eruption: vesicular stage.

FIG. 2.

Seventh day of eruption: pustular stage.

at all, but presented a slightly elevated, usually oblong surface, quite firm to the touch and of a dull chocolate colour. Other characters common to the small-pox exanthem were, however, present—viz., distinct depression as if from drawing together of the centre in some cases, in others a softening of the surface with scabbing, without any evidence of the usual cycle of vesiculation and pustulation. Distinct vesiculation such as is suggested, to quote any one of the recognised authorities, by the description "hemispherical in form and opaline in appearance"[1] was not manifestly present, and, as many other indications pointed to the eruption being that of small-pox, proof of vesiculation was sought for by puncture of one of these flat elevations; the result was the escape of a small amount of serous fluid removing all doubt of the condition. Previous experience might have led to the same conclusion at an earlier stage, but as the decision of the true nature of the case was one of immense importance to the ship's company it was delayed by the outlook for such a condition as the common description of vesiculation had suggested. Subsequently confluence of these areas and the appearance of pustulation took their usual course, producing the appearance seen in Fig. 2, the only additional fact worthy of remark being the presence of black scabs among the pustules indicating unusually speedy maturation here and there. The prognosis was not at first grave, the only disturbing factors in the early stages being the great tropical heat both by day and night and the early appearance of delirium. The extensive confluence in the later stages indicated a serious outlook. Curiously, what appeared to be the turning-point towards recovery must have been a final struggle on the part of nature, for on the day preceding his death the patient had for the first time expressed himself as "getting better," and his general condition had, moreover, apparently improved.

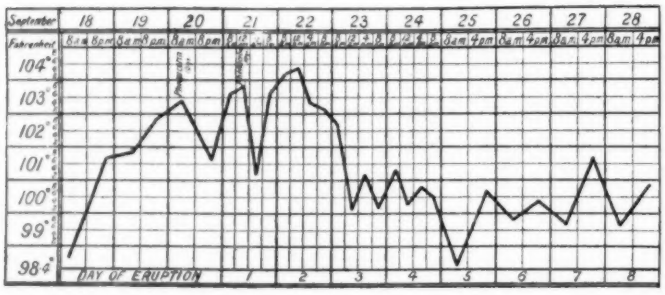

Chart showing rise until Sept. 22nd, when the temperature was over 104° and there were spots all over the body. Coincidently with the appearance of the rash the temperature fell.

With regard to treatment, little could be done medicinally. Quinine evidently had little or no effect in controlling the initial fever, although phenacetin in equal doses (ten grains) took effect upon two occasions. Bathing the eyes with a weak solution of perchloride of mercury gave much relief, as also did the application to the face of boric and zinc powder on a mask of boracic lint. Milk diet was adopted on the first evidence of continued fever; condensed milk only being available, this was given with fine-boiled rice three times daily. Alcoholic stimulant, for which there seemed no indication till the onset of the secondary fever, was at first refused on religious grounds (its use involving loss of caste), but was insisted on later when strength was evidently failing with good, although temporary, result. Isolation was at first no easy matter owing to the Lascars, having no idea of contagion, trying to communicate with the patient; the cabin had to be barricaded so that entrance could only be obtained in sight of the watch on the bridge; the delirium of the patient added another danger, as on one occasion he rushed out on deck and was got back with difficulty. On my part, too, there was great need for caution, as the case had to be taken full charge of in addition to my ordinary duties. To allow of this special clothing was set apart for my visits; my cabin was occasionally fumigated, and a hot bath, impregnated with Condy's fluid, was taken after every visit. Disinfection in the cabin set apart for the patient was effected by means of a moist sheet sprinkled with carbolic solution hung over the doorway. All food, &c., was passed to me through the barricades and the dishes washed with carbolic solution after use. After the death of the patient his cabin was washed down with the steam hose and afterwards scrubbed with carbolic acid, while both it and the forecastle adjoining were well fumigated. It was with difficulty that the Lascars could be argued into leaving to me the preparation of the body for burial, and, while conceding this, they insisted on holding a burial service on deck. Every precaution was taken by the captain, who stopped the ship and ran her broadside to the wind. Three of the Lascars who bore small-pox marks were chosen to remove the body from the cabin (where it had previously been wrapped in well-carbolised sheets and canvas) to the deck, where they deposited it on one side; the whole of the Lascar crew assembled on the other at a distance of some four yards while the service, lasting a quarter of an hour, was conducted. After the body was consigned to the deep additional precautions were taken to disinfect those who had acted as bearers.

These facts are given in some detail because they seemed to bear a sequel, for thirteen days afterwards (the ship having escaped quarantine at Suez, Port Said, and Malta) a young Lascar fireman was struck down by symptoms which soon left no doubt that he was suffering from small-pox. The coincidence of this lapse of time—corresponding so closely to the usual period of incubation—with the onset of his symptoms seemed to point to the burial service on deck as a loophole in the disinfectant precautions. This was all the more disappointing as the danger of its being so had been clearly recognised, and though the service seemed inevitable great care had been taken to isolate the participants in the service from the deceased as far as possible. Fortunately for the sequel, this second case was of a much milder type and made a good recovery on reaching the Thames.

Glasgow.

[1] Hilton Fagge: Text-book of Principles and Practice of Medicine, third edition, p. 202.

FURTHER NOTE ON THE TREATMENT OF TAPEWORM.

BY LESLIE OGILVIE, B.Sc., M.B. EDIN., M.R.C.P. LOND.,
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IN THE LANCET of Aug. 4th, 1894, I contributed a note on the Treatment of Tapeworm. As six cases—two children and four adults—which I have since seen had been previously treated unsuccessfully I venture to think that my further experience may be of interest. The line of treatment indicated in my previous communication was successfully followed in all of these cases, but I desire to refer to two of them as they appear to me to corroborate the views I then expressed as to the necessity of preparing the patient before administering the vermifuge and the absence of danger in giving the considerable doses of the liquid extract of male-fern which I recommended if it is speedily washed from the bowel.

CASE 1.—The patient was a little girl aged seven years who had undergone treatment many times during three years, but without success. She had been given repeated small doses of about fifteen minims of the liquid extract of male-fern, and although numerous segments of the worm were passed after each course of treatment they re-appeared in the stools in two or three months, when the child herself would again ask for "fern," as she felt sick and irritable and had abdominal discomfort. The child dreaded the administration of the drug as it always made her so ill for some days, but she preferred this to the unpleasant sensations produced by the presence of the parasite. The medical man in attendance was afraid to give the large doses recommended by me—one drachm at 8 A.M. and another drachm or half a drachm at 9 A.M.—as he argued that if fifteen

minims produced such severe toxic effects six or eight times that dose would be dangerous. As I previously pointed out this is exactly contrary to my experience. The small doses produce toxic effects because they remain in the bowel and are to some extent absorbed, while the large doses are sometimes expelled from the bowel within two hours of being taken, frequently before the final dose of castor oil has had time to operate. In this case I was not given time to follow thoroughly the few days of preliminary treatment by means of saline purgatives, and as, unfortunately, the child was especially constipated I had no means of properly gauging the amount of purgative required to evacuate the bowel with certainty. Without having the bowels satisfactorily moved by the evening and early morning doses of sulphate of magnesia and jalap I gave a drachm of the liquid extract at 8 A.M. followed by forty-five minims in an hour. As the castor oil given two hours afterwards failed to operate enemas were freely used and another dose of oil was administered about two o'clock. The entire tapeworm, including the head, was passed between four and five o'clock, together with a considerable quantity of mucus. The child had not suffered from the sickness, faintness, or other toxic effects which she always experienced after the small doses, but an erythematous rash appeared on the skin of the face and body in the evening, showing that some of the poison had been absorbed. She, however, felt well, ran about all day, and shared in the delight of her mother in having got rid of the enemy. I feel convinced that if I had insisted, as I usually do, on having the bowels freely opened for several days before administering the vermifuge, and if an effectual dose of castor oil had been given afterwards, the rash even would not have appeared. This case, therefore, shows the importance of procuring free evacuation of the bowel both before and soon after treatment by the vermifuge and, I think, goes far to establish the fact that effectual doses produce no more toxic effects than small inefficient doses, even though administered without the careful preparatory and subsequent measures I advise.

A case of exanthema after the use of extractum filicis maris æthereum is reported by von F. Schmey.[1] The case was that of a broken-down old woman who, after taking ten grammes of the preparation, suffered from redness and swelling of the eyelids which spread to the cheeks and forehead and disappeared entirely in three days. Von Schmey thinks that the effect was perhaps due to the simultaneous administration of castor oil, in which filicic acid, the poisonous principle, is easily soluble. I certainly think that the castor oil should not be given along with the male-fern, because an ineffectual dose would lead to the poisonous symptoms above noted, and an efficient dose would wash the poison from the bowel before it had time to injure the worm. If an efficient dose is given two hours afterwards the solubility of the poisonous principle in the oil would facilitate its removal from the bowel.

CASE 2.—I was careful in this case, that of a middle-age woman with symptoms of obstinate constipation, to prescribe a course of purgatives for two weeks. The aperient which suited best in this case was Hunyadi Janos which she took for about a week with excellent results and no discomfort. As I previously pointed out, saline aperients are the best for the preparatory treatment as they rid the bowel of the excess of mucus which is present in most cases of tapeworm and thus expose the worm to the full action of the poison. It is more effectual to administer castor oil with jalap after the vermifuge because this combination is more rapid in its action, the object being to remove the poison from the bowel before it is absorbed, and the worm before it has time to recover and re-attach itself to the mucous membrane. In this case, after the course of medium doses of Hunyadi Janos every morning for a week, she had a dose of sulphate of magnesia and tincture of jalap one night followed by Hunyadi Janos in the morning at 7 A.M., the drachm doses of the liquid extract of male-fern at 8 and 9, and castor oil with tincture of jalap at 11 o'clock. The worm was passed along with much of the liquid extract between 9.30 and 11 o'clock, therefore before the oil was given; but, notwithstanding this, I gave the dose of castor oil and jalap to make sure that all the poison was removed from the bowel. The patient did not feel any ill effects from these apparently severe measures: in fact she suffered less than she had done on four previous occasions when she was unsuccessfully treated for tapeworm. It may be, of course, that the assurance that she was free from this parasite for ever made her minimise her sufferings.

Welbeck-street, W.

[1] Allgemeine Medicinische Centralzeitung, 1895, No. 68.

A CASE OF MALARIOUS FEVER.

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THE following case of malarious fever occurred in a medical student of the local medical school, who has just finished his curriculum and has been under my observation for five years. In his recollection and in mine he has never had fever until last September, when crescents were discovered in his blood the day after the first attack commenced. He always lived in the city of Hyderabad, but a month before he got fever he changed his residence to a malarious suburb called Troop Bazaar, and he has had fever about once in two months since. The last attack took place at the end of March, 1896. He was cured with quinine, and when he got well was directed to have his blood examined every day until the onset of the next attack—the attack under report,—in order to enable us to determine whether the presence of Laveran's bodies in the blood precedes or follows the disease. Accordingly, the microscope examinations of his blood were made daily, and no Laveran's bodies were found from April 8th to 30th inclusive. On the morning of April 30th he looked poorly and complained of pain and uneasiness in the region of the spleen and liver. The blood on this day was thoroughly examined by three competent observers and nothing abnormal was detected in it. He went home at 10 o'clock A.M., and at noon had very violent ague followed by the usual hot and sweating stages of intermittent fever. Next morning Laveran's bodies were found in the blood. He was kept under observation without quinine till May 4th, when we gave it to him, and he has had no fever or Laveran's bodies in the blood since and is now (May 7th) quite well. The following table shows the dates of the attacks of tertian ague, the results of the blood examinations, and the dates on which he took quinine, from April 30th to May 6th, 1896.

Table showing the relation between Intermittent Fever, Laveran's Bodies, and Quinine in the Case of a Patient attacked with Ague and Fever on April 30th, 1896.

Date.	Laveran's bodies.	Fever.	Quinine.
April 30th ...	None found at 9 A.M.	Came on with ague at noon.	None.
May 1st ...	Intra- and extra-corpuscular "swarming."	None.	None.
,, 2nd ...	Same as on May 1st; but leucocytes also "swarming."	Came on with ague at 11 A.M.	None.
,, 3rd ...	Same as on May 2nd.	None.	None.
,, 4th ...	Same as on May 3rd; rosettes.	Came on with ague at 8.30 A.M.	Ten grains at 10 A.M. and five grains at 4 P.M.
,, 5th ...	None.	None.	Five grains at 10 A.M. and five grains at 4 P.M.
,, 6th ...	None.	None.	Same as on May 5th.

In this case there were no Laveran's bodies in the blood before the disease began; they did not appear until after it was established and they were obviously one of its effects and not its cause. The bodies seen daily in the blood between May 1st and 4th bore signs of the well-marked relationship of Laveran's bodies to the white blood-cells to which I called attention in the address I had the honour of delivering before the profession in Bombay on April 4th last. Additional evidence in this direction was furnished unexpectedly by the rosette forms which were found in the blood on May 4th. One of these bodies was traced from its origin to its termination. It appeared first like a red blood-cell with a spot of black pigment in the centre. A number of small cells then made their appearance in the form of a rosette round the central black spot

and went through the changes depicted in Figs. 5, 6, 7, and 8, Plate II., of Mannaberg's work except that the small cells were devoid of nuclei. The parent cell-wall was no longer visible and fourteen separate little cells, clustered round a clear black-looking cell—the original (?) pigment,—were left naked on the field. They now resembled Edington's diagrams of discharged blood-plates. While we were wondering if we should see each of these cells go off and lead an independent existence the original cell-wall re-appeared and enclosed them all in its interior again. They then gradually faded away and nothing remained but the original cell with a black fluffy spot in the centre. The rosette, instead of being, as the plasmodists declare, a "sporulating parasite," is thus shown to be nothing more than a transition form of the extra-corpuscular Laveran's body. The transition is analogous to changes which occur in the white blood-cell when, for example, its granules are shed and its cell-wall, after becoming invisible, reappears and encloses them again just when they seem to be about to enter upon an independent life. The most remarkable and suggestive point in the changes which the rosette body undergoes under the microscope is that before the rosette appears in the cell it looks like a red blood-cell, whereas afterwards it has more the appearance of a leucocyte.

THE PRACTICAL APPLICATION OF "X" RAYS TO SURGERY AND SURGICAL TEACHING.

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By the kind permission of the Surgical Staff of King's College Hospital I have been enabled, during the last few weeks, to do some experimental work upon cases in the wards and outside with my "x" ray apparatus, and I find that the practical application of the process to surgical work may briefly be grouped under three headings, thus—(1) to the finding of foreign bodies; (2) to general bone surgery, especially fractures; and (3), though perhaps the most important, to surgical teaching. I will content myself for the present with giving merely one or two cases in point.

1. The Finding of Foreign Bodies.

A woman aged twenty-two years ran a needle into her right hand close to the pisiform bone in August, 1894; a portion of it was removed directly after the accident, but it was thought that a piece was left behind in the hand. Pain and swelling of the hand and arm followed, but no abscess formed and no further indications as to the position of the needle were discovered. She had two or three such attacks, and in August, 1895, a year after the accident, she, for the first time, noticed that the thumb became swollen and painful and occasionally the joints (inter-phalangeal and metacarpo-phalangeal) were locked; these latter attacks were recurrent usually every three or six weeks and lasted about three days, and in consequence she was prevented from making any use of the hand. I saw her on April 27th, 1896, and found that there was swelling of the right thumb from the head of the metacarpal bone to the tip of the terminal phalanx, more marked on the palmar aspect. The swelling might be best described as an indefinite thickening evidently corresponding to the sheath of the flexor tendon: there was no creaking on movement, and the movements of the joints were normal and caused no pain. No trace of a foreign body could be felt. I asked Mr. Cheatle to see her and he agreed with me that there was no indication that a foreign body was the cause of the trouble and that, unless such was proved to be present, he would not recommend operation until other treatment had failed. I then examined it with the cryptoscope, and finding the condition as shown in the illustrations given below, photographed the thumb in two positions. Fig. 1 was taken with the palmar surface of the thumb on the plate, so the shadow of the needle is shown *through* the first phalanx. Fig. 2 was taken with the radial side on the plate, the hand being fully pronated. Exposure in each case was one minute. These photographs show very well the use of taking them in different positions so as to determine the exact position of the needle in the body. Two days later I cut down and opened the sheath of the long flexor and on hooking aside the tendon found the needle lying between it and the bone, as I had expected, and removed it. In this case a definite opinion as to the cause of the trouble was impossible to be formed without the use of the "x" rays unless after an

FIG. 1.

Needle shown through phalanx. The palmar surface of the thumb was on the plate. Exposure one minute.

exploratory incision, which is neither easy to obtain leave to do from the patient or friends nor always satisfactory from the surgeon's point of view.

I wish to emphasise the fact that in many cases of needles in the body, &c., it is quite unnecessary to examine them

FIG. 2.

Side view of thumb; the hand was pronated, so that the radial surface was on the plate. Exposure one minute.

with the cryptoscope or obtain a skiagraph of them, as they are obvious to the touch of the surgeon, and so there is no need, except for demonstrating purposes, to waste time over them; and also the fact that, although one can readily

obtain skiagraphs of a part with a needle in it, it does not necessarily mean that the said needle will be always found by the operator with the same ease. This has been well shown in a case now under treatment at the hospital. A woman aged twenty-six years was sent up from the country on April 29th, 1896, having trodden upon a needle ten days previously. On the sole of the foot a mark was found just internal to the base of the fifth metatarsal bone and on a level with the spur of that bone deep tenderness could be easily elicited and the patient was unable to walk and do her work on account of pain. The cryptoscope having shown that a needle between a quarter and half an inch long was present photographs were taken in two positions and these apparently showed the needle in an accessible position. However, an exploratory incision down to the spot failed to reveal any indication of it, so the wound was sewn up and re-photographed. Finding the needle in the same position experiments were conducted with a skeleton foot on the screen and the same shadows were found to be produced by a needle lying in the sheath of the peroneus longus, so the wound was opened and the sheath and tendon carefully explored, but no trace of the needle was found. The foot was then photographed in four different positions with a guide needle placed in the wound and the relationship of the two thus determined, and a third operation was undertaken, but was equally unsuccessful. The skiagraph taken after the wounds were healed reveals the needle still in the same position. This case shows very clearly the great difficulty which may be experienced in removing a foreign body when one has the shadow only to work from.

Since these cases I have been successful in obtaining a skiagraph of a bullet of which no indication by external manipulation could be obtained. The man had shot himself, and the wound of entrance was over the fourth intercostal space about one and a half inches to the left of the left nipple. A probe passed back and slightly upwards for about three inches and appeared not to enter the chest, but to skirt the ribs. On admission the patient had no symptoms of wound of the lung, but there was a slight trace of dark blood in some sputum eighteen hours afterwards. The apparatus was all put upon a trolley with indiarubber wheels and wheeled into the ward to the bedside, and the plate being adjusted behind the left shoulder without moving the patient, with a fifteen minute exposure a skiagraph was obtained showing the position of the bullet external to the ribs, lying close to the axillary border of the scapula. This case is interesting, as it shows that the bullet does not lie in a dangerous position.

(To be continued.)

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF STRANGULATED FEMORAL HERNIA.

BY CLARKE WAKEFIELD, M.D. BRUX., F.R.C.S. EDIN.

THE following case seems to me to present several features of interest. A spinster aged sixty-nine years was first seen on April 13th at 11.30 P.M. The history was that she had worn a truss for thirty years without discomfort. During the last six months she had noticed that the hernia had increased slightly in size, but she had had no pain until the 12th at about 7 P.M. The pain gradually increased and the patient began to vomit. Late at night on the 13th, on examination I found a tense nodular hernia as big as a large horse-chestnut. The patient was retching violently and brought up some distinctly stercoraceous vomit. Her countenance was pinched and pale, her pulse thin and wiry. I tried gentle taxis, but from the history of the case and the rapidity with which the symptoms had come on I deemed it wise not to persevere with the attempts to reduce the hernia in this way. An hour after seeing the patient Dr. G. N. Adams kindly gave ether for me and I proceeded to operate. The operation was comparatively simple as the patient was very thin, the sac being exposed without any vessel requiring to be ligatured. On opening the sac some dark sanious fluid escaped, and a knuckle of bowel, which appeared by lamplight to be black, was exposed. The bowel had not lost its lustre and I decided to return it: this was easily done after incising the base of Gimbernat's ligament. It seemed wiser, in view of the deeply congested state of the gut (a piece of small intestine), not to attempt a radical operation or even ligature the neck of the sac, so I contented myself with removing a piece of omentum which was adherent to the sac and closed the upper three-fourths of the incision with catgut sutures. The temperature remaining normal the wound was not dressed again till the fifth day, when it was dressed for a reason which will presently be given. To return to the course of events following the operation. She vomited six times, and the bowels acted twice with loose motions early on the day after the operation. There was no vomiting on the second and third days, but on the fourth there was an attack of tympanites accompanied by frequent vomiting of bile-stained fluid. On the fifth day, these symptoms continuing, I gave a turpentine enema and changed the dressing to see whether anything to account for the symptoms could be seen in the wound, which, however, I found had healed by first intention. Eight hours after the enema was given she passed a scybalous motion, and from that time the recovery was uninterrupted. I last saw her a month after the operation; the patient was up and about, the scar was quite sound, and there was no impulse on coughing.

Remarks.—It is hardly necessary to remark on the insecurity of a person who wears a truss over an irreducible omental hernia, as I presume was the case of this patient for the thirty years during which she had worn the truss—a hollow Coles's truss. Perhaps the chief interest of the case rests in the attack of tympanites and vomiting mentioned above. Seeing that this attack ended suddenly after a large quantity of scybala had been passed there is little doubt that it was due to a temporary block in the large intestine.

Ladbroke-grove, W.

NOTES ON THE TREATMENT OF MEASLES.

BY A. DUNLEY OWEN, M.R.C.S. ENG., L.R.C.P. LOND.

DURING the early months of this year an epidemic of measles of a severe type visited Northampton and the surrounding district, and there was an unusually high mortality from this disease, chiefly, I believe, from concurrent bronchial and pulmonary inflammations. Of the cases that fell to my share I took notes of over 300 with a mortality of only 4, of whom one died from capillary bronchitis three hours after I was first called in, and the others were under two years old and succumbed to broncho-pneumonia. I attribute this low rate of mortality to the method of treatment I have invariably adopted—namely, to order jacket poultices, changeable every three hours, as soon as any indications of measles show themselves and before the rash appears, and I think this has been beneficial, for death has only occurred in those cases in which the mother discontinued the poultices after the first application, or, as in one case, thought proper not to poultice at all. The only medicinal treatment adopted has been ipecacuanha wine with acetate of ammonia, with a boric acid wash for the eyes in those cases which were complicated by catarrhal inflammation of the lids. Stomatitis occurred in about one-half of the cases and invariably yielded to the application of a saturated solution of chlorate of potash to the inside of the mouth, the children being too young to use a mouth wash.

I venture to think that these notes may be of some slight interest, as all the cases noted were of a severe, and some almost of a malignant, type, the slighter ones being passed over. Convalescence proved slow in nearly all the above cases; curiously, though, the town children gain strength far quicker than those in the surrounding country districts, possibly owing to the higher wages of the town workers procuring for their children a more generous diet.

Northampton.

CONGENITAL LUMBAR HYPERTRICHOSIS AFFECTING TWO SISTERS.

BY L. A. PARRY, M.B., B.S. LOND., F.R.C.S. ENG.

THE following examples of a not very common abnormality may be of interest to the readers of THE LANCET. The subjects are two girls, the third and seventh children of a family of seven; the remainder are not

affected. The hirsuties dates from birth in either case. Both parents are English. The condition of the elder child as an infant was identical with that of the younger at the present day. The elder of the two girls, aged ten years, has in the lumbar region a triangular patch, base upwards, of fine silky golden hair; the base of the triangle reaches a level one inch above the highest point of the iliac crest, and the apex is one inch above the gluteal cleft. The hair, which is directed downwards, is of a slightly lighter colour than that of the scalp and attains a length of five inches; there are no mental defects. The younger patient presents the same condition as her sister, but in a much less degree. The elder is the subject of old infantile paralysis of the right leg, giving rise to local peripheral gangrene and talipes equinus. There is no sign of spina bifida or perforating ulcer, as in the cases referred to by Mr. Bland Sutton in THE LANCET of July 2nd, 1887.

South Norwood.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. GEORGE'S HOSPITAL.

A CASE OF PERFORATED GASTRIC ULCER TREATED BY LAPAROTOMY; RECOVERY.

(Under the care of Mr. C. T. DENT.)

COMPARATIVELY few cases have hitherto been published of the successful treatment by laparotomy of this formidable complication of a somewhat common disease. It seems, therefore, desirable to place this one on record, as showing that perforation of a gastric ulcer is not necessarily fatal if skilled assistance is obtained and the opening promptly sutured. It also affords a good example of the promptitude of the medical attendant in recognising the occurrence of a perforation before peritonitis has set in and the necessity for surgical interference. The chief points in this case are the occurrence of a perforation on the posterior aspect of the stomach and the oblique line taken by the perforating ulcer. It has been calculated that only 2 per cent. of ulcers of the posterior wall perforate.

A spare, anæmic woman aged twenty-six years who had suffered from indigestion for many years was admitted into St. George's Hospital on Nov. 19th, 1895. On one occasion three years previously she had had a tolerably profuse attack of hæmatemesis which came on suddenly at night. At 4.30 P.M. on the day of admission she was seized with sudden and severe epigastric pain which developed shortly after she had been moving some heavy boxes. She felt sick and, with the idea of relieving her symptoms, drank some hot water. This made her pain worse. Shortly after taking the water she vomited it all together with some half-digested food. As she had not eaten anything for some hours previously it was evident that her gastric digestion was very slow. She was seen shortly after the onset of the attack by Dr. Roxburgh Fuller, who, recognising the probability of perforation, sent her at once to the hospital for operation, acting thus with a promptitude all too rare in such cases, but to which she probably owed her recovery. The patient had for some time previously been suffering from menorrhagia. When seen directly after admission she complained of intense epigastric pain. The abdomen was rather distended and there was tenderness in the epigastric region. There were considerable difficulty of breathing and cardiac distress. The apex beat was an inch or an inch and a half higher than natural. The resonance in the left hypochondriac region was very marked and gave a higher note than natural. There seemed to be little doubt that the patient was suffering from the effects of perforated gastric ulcer. Judging by the physical condition of the abdomen it was thought that the ulcer was on the posterior wall of the stomach. The operation was at once undertaken, between six and seven hours after the first onset of acute symptoms. Mr. Dent opened the abdomen in the median line above the umbilicus, an incision which in such cases appears to him on the whole to answer as well as any other. The peritoneal cavity contained some opalescent fluid of acid reaction; but there was no undigested food free in the cavity, so that presumably the perforation was a small one. The fluid was, as usual in cases of perforation on the posterior wall, chiefly in the left hypochondrium. Even at this early stage moderately firm adhesions had formed, limiting the characteristic cavity formed by the diaphragm, the falciform ligament, and the stomach. There was a slight amount of lymph on the under surface of the diaphragm and on the posterior surface of the stomach, and such coils of intestine as presented were of bright colour and injected, with their surfaces slightly roughened by lymph. Some tolerably firm bands of peritoneal adhesions about the stomach suggested previous trouble: one of these bands, passing obliquely, compressed the stomach very markedly. After separating the adhesions Mr. Dent was able to expose the posterior surface of the stomach. There was no gap to be seen. Midway between the greater and lesser curvatures and towards the pyloric extremity was a thicker and rougher deposit of lymph extending over an area of the size of half a crown. A probe passed into this rough surface entered a sinuous track but did not appear actually to enter the stomach. The operator of course avoided making more than the very lightest pressure. On grasping the posterior wall of the stomach between the fingers and thumb an indurated area of about the size of a five-shilling piece, circular and with well-defined edges, was readily felt. The rest of the stomach was fairly healthy. It seemed probable, therefore, that a small perforation had taken place at some point in this indurated area, probably about the centre. Mr. Dent therefore passed sutures through the muscular and serous walls of the stomach on either side of the indurated portion and sewed the two re-duplications over the induration. The cavity which contained the fluid that had escaped from the stomach was irrigated with hot boracic solution until the injection returned quite clear. No drainage-tube was employed. The patient vomited once after the operation. She was placed in bed with the head and shoulders well raised—a position which Mr. Dent considers to be of the greatest importance in all such cases and especially where, as in this instance, the heart's action is impeded by abdominal trouble. After flushing out the peritoneal cavity, especially after a long and tolerably exhausting operation on a heated operation table, patients are prone to break out into very profuse perspiration and, if not very carefully watched, run some risk of chill. The sweating may be largely obviated by sponging out the peritoneal cavity until nearly dry; but this seems to Mr. Dent an undesirable practice and one that prolongs the operation unduly. In such cases his usual practice is to avoid all linen clothing next the skin and to direct the nurse to rub over the limbs and the whole surface of the body gently and constantly for a couple of hours, if need be, with soft, warm towels. The effect of this very mild massage not only prevents any chill but constantly sends the patient off to sleep; and the rubbing may even be persevered in with advantage, if very gently done, during actual sleep. For the first twenty-four hours the patient was kept on nutrient enemata and suppositories. After that small quantities of food such as peptonised beef-tea, milk, chicken broth, and the like were given by the mouth. The day after operation there was considerable distension, obviously of the colon, and the temperature ran up a little, but the trouble passed away at once after an enema rube had been given with a long tube. The highest temperature was 100·2° F. on the second day after operation. After this the temperature fell to normal and remained so. Throughout the patient was kept well raised in bed and turned on to her right side with the idea of keeping the food away as much as possible from contact with the ulcerated surface and favouring its passage through the pylorus. In all gastric operations the patients will do better if they are kept well raised in bed from the first, and in cases of pyloroplasty Mr. Dent has seen vomiting at once checked by merely raising the patient. Save for a little stitch-hole suppuration the recovery was uninterrupted. Such suppuration, which merely signifies the separation of minute sloughs owing to the pressure of the stitches, is almost invariable, he thinks, when there is any degree of

distension after laparotomy. The apex beat gradually came down towards the normal, but was above the usual point even when she left the hospital. Almost from the first the patient exhibited considerable intolerance of any form of milk. Benger's food was found to answer well. The patient was seen a few months after operation. She was then in good health and made no complaint of digestive troubles.

Remarks by Mr. DENT.—There is little to be said about a case such as this, which presented really no complications. The chief credit is really due to the medical man who recognised the symptoms so promptly and allowed no time to be wasted. It was quite clear from the condition of the abdomen that in a very few hours the case would have been a very much more formidable one for the operator. As it was I cannot but think that she only just escaped the lung complications which have led to a fatal issue in so many cases which have been operated on. In this instance as the woman was not much exhausted I delayed giving any food by the mouth for twenty-four hours, but I would not hesitate to give food by the mouth almost immediately after operation if there is much exhaustion. I do not consider that "physiological rest" of the stomach is practically so complete when all food by the mouth is absolutely withheld as when small quantities of easily absorbable materials which are likely to pass readily on into the intestine are given. In this case milk did not seem to be such a food, and I think this will often be found the case. I believe it to be also very important in these cases, as in those of strangulated hernia, to bring about action of the bowels as early as possible. The idea that we are resting damaged intestine by allowing accumulation to take place in it and distention to occur is unsound, and the accumulation that will take place in such cases even when apparently next to no food has been taken for a long time, and where constant vomiting possibly occurs, is surprisingly great. Physiological rest of the intestine is best secured when the natural functions of the intestine are being discharged as nearly as may be in the normal manner. In the museum of St. George's Hospital are several specimens illustrating a condition similar to that which I believe existed in my patient. The track of perforation is often sinuous and of considerable length when it passes obliquely through the coats of the stomach.

SUSSEX COUNTY HOSPITAL.

A CASE OF PERFORATED GASTRIC ULCER; LAPAROTOMY; RECOVERY.

(Under the care of Mr. R. F. JOWERS.)

IN THE LANCET of March 2nd, 1895 (Mirror of Hospital Practice), we published the notes of a case of successful operation after perforation of a gastric ulcer, which was also treated at the Sussex County Hospital and by the same surgeon. We are pleased to place the account of this somewhat similar case before the readers of THE LANCET. It may be recollected that in the other instance alluded to a woman aged twenty-four had suffered from dyspeptic symptoms for two years, symptoms of perforation came on six hours before the operation, when an ulcer on the anterior aspect of the stomach was found, drawn into the wound, and sutured with some difficulty. Symptoms of collapse on the twelfth day led to a re-opening of the wound, but nothing wrong was found, and afterwards the patient got rapidly well. Mr. Jowers appended to his case a list of those which had been subjected to the operation, twenty-five in number, with success in about 35 per cent. So many have been recorded since that the list is far too long for the space at our disposal. For the following notes we are indebted to Dr. Hood, assistant house surgeon.

On the evening of Feb. 10th, 1896, Mr. Jowers was asked by Mr. Baines to see a patient to whom he had just been called and in whom he had diagnosed perforated gastric ulcer. She was a somewhat anæmic but well-nourished girl aged nineteen years. Between two and three months before admission she first felt pain after food in the left side and between the shoulders, lasting about an hour. This became gradually worse, until in a month's time she had great tenderness all over the left hypochondriac region, so that she was obliged to remove her stays in the evening. This continued till the date of admission, but during the whole time she had never vomited or brought up blood. On the afternoon of the day of admission (Feb. 10th,) she was out shopping. About 5 P.M. she had her usual meal of tea and bread-and-butter and again went out. On returning two hours later she was seized with sudden acute pain over the whole abdomen and faintness. The pain was so severe that she lay "doubled up," groaning, and unable to bear being touched. She was given some brandy, which made the pain worse, and then some peppermint, which was almost immediately vomited. There was no blood in the vomit. When first seen by Mr. Jowers about 8.30 P.M. she was extremely collapsed and in intense pain, the slightest movement or touch causing her to scream out. She was supported by pillows so as to relax as far as possible the abdominal muscles, and the knees were drawn up. The abdomen was fixed, scarcely moving with respiration, but there was no marked distension. At this time there was no loss of liver dulness. The pulse was feeble and rapid. It was decided to give her a hypodermic injection of morphia at once and remove her as soon as possible to the hospital. On her admission she was in much the same condition, except that the liver dulness had disappeared and the abdomen was slightly distended. Before being taken to the operating theatre an enema of milk, beef-tea, and brandy was given and ether administered. Mr. Jowers, assisted by Dr. Black, made an incision in the median line, commencing just below the xiphosternum and continued vertically downwards for about three inches. An unusually thick layer of sub-peritoneal fat was met with. On opening the peritoneum a small quantity of free gas escaped with a strong odour of peppermint. The stomach presented at the wound and was carefully drawn forwards and examined; some recent lymph was noticed on its surface and on the edge of the liver. A perforated ulcer rather smaller than a threepenny piece was found on the anterior wall at the cardiac end near the entrance of the œsophagus. By means of two silk sutures passed through the outer walls of the stomach at some distance from the ulcer the latter was brought well into the abdominal wound. Gauze was packed around and a tube passed through the ulcer into the stomach, some greenish fluid escaping smelling strongly of peppermint. An attempt was then made to wash out the stomach through the tube, but it proved unsatisfactory owing to the tube getting blocked by solid food. The edges of the ulcer were then pared by two curved incisions leaving an elliptical opening about an inch in length which was closed by two rows of Lembert's sutures of very fine silk. The abdomen was thoroughly flushed with hot water, the washing being continued till the water returned quite clear. The abdominal wound was closed with salmon-gut sutures, a glass drainage-tube being inserted at the lower end, and cyanide gauze dressing was applied with a Keith's rubber dressing surrounding the tube. On the 11th the patient was sick twice during the night, bringing up undigested food smelling of peppermint. At 7 A.M. the patient was drowsy with contracted pupils, being still somewhat under the influence of morphia; the pulse was 130 and feeble, the respiration was 56, and the temperature was 101° F. The abdomen was scarcely moving and generally tender. She had passed urine. Nutrient enemata of milk, beef-tea, and brandy had been given every four hours, but nothing by the mouth. The patient was ordered half a pint of coffee with an ounce of brandy per rectum. At 4 P.M. the temperature was 100·4°, the pulse was improving, and the abdomen was beginning to move. By means of a glass syringe and tube a little flaky turbid serum had been drawn out of the drainage-tube four times. She had suffered a good deal of pain and had an anxious facial expression. Twenty minims of tincture of opium were given in a nutrient enema at 4 P.M., at 8 P.M. a hypodermic injection of three minims of morphia solution, at 12 midnight fifteen minims of tincture of opium, and at 4 A.M. ten minims in a nutrient enema. On the 12th the pain and general tenderness were much relieved, the abdomen was moving fairly, and the facial expression had become much more cheerful. She was sick once at 4 A.M. with green bilious vomit. The pulse was 108, the respiration 28, and the temperature 98·6°. The patient had had her mouth washed out but had swallowed nothing since the operation, but she had retained the enemata. No flatus had been passed since the previous day. About a drachm of flaky and slightly turbid serum was drawn up from the drainage-tube. The abdomen being slightly distended, an enema of turpentine and gruel was given at 3 30 P.M. She

was sick several times and had a good deal of pain. On the 13th, however, she had no pain or tenderness, the abdomen was moving well, and there was no sickness, the patient passing flatus freely. The bowels were opened loosely four times. The pulse was 110, the respiration 20, and the temperature was 99·4°. The serum drawn up from the drainage-tube being quite clear the tube was withdrawn and the stitch, inserted for the purpose at the time of operation, was tied. Small pieces of ice were given by the mouth. On the 14th the patient was going on well. A teaspoonful of hot water was given by the mouth every half-hour when the patient was awake. The nutrient injections were continued. On the 15th two teaspoonfuls of peptonised milk and beef-tea were given alternately every half-hour and increased to a tablespoonful at 12 noon. There was no pain or sickness. On the 16th the patient's food was increased to one ounce of milk and beef-tea alternately every hour. Her temperature was 99°, the pulse 80, and the respiration was 24. There was still no pain or sickness. Nutrient enemata were administered every six hours. Two stitches were removed. On the 19th the remaining stitches were removed, the wound being quite healed. An egg beaten up in peptonised milk was ordered. The nutrient enemata were continued till March 3rd, and fluid diet was continued till the 9th, when boiled fish was given. Owing to the patient's dislike for fish minced chicken was substituted next day. This, with milk pudding, custard, &c., was continued until she left the hospital quite well on the 26th. On April 10th the patient reported herself in the out-patient room and said she had no pain or sickness. She appeared to be in excellent health.

Remarks by Mr. JOWERS.—This was a case presenting no great difficulties to the operator. The ulcer was situated anteriorly and towards the cardiac end and was easily reached. The way in which the liver dulness varied is noteworthy, for though there was nearly complete absence of liver dulness when the patient was seen in bed just before removal to the theatre it appeared to be normal when she was fully extended under the anæsthetic on the operating table, a fact which can only be attributed to the change in position. As not infrequently happens in perforating ulcer, either of the stomach or duodenum, there had been no previous vomiting or hæmatemesis. To the fact that a prompt diagnosis was made by Mr. Baines and that she was thereby enabled to be operated upon some three and a half hours after perforation the satisfactory result may be attributed.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Splenic Anæmia.

THE last ordinary meeting of the present session took place on June 9th, Dr. W. HOWSLIP DICKINSON, President, being in the chair.

The PRESIDENT made brief allusion to the losses which the society had sustained since the last meeting by the deaths of Sir J. Russell Reynolds and Sir George Johnson, the former of whom, he said, was distinguished by his culture and his learning and the latter had been one of the main supports of the society during the greater part of his career, had once been President, and most of his work had seen the light in the society's Transactions.

Dr. SAMUEL WEST read a paper on a case of Splenic Anæmia (spleno-megalie primitive) and gave an account of the disease. The patient was a man aged thirty-six who came to hospital suffering with extreme anæmia, high temperature, and a large spleen. The examination of the blood proved that it was not a case of leucocythæmia. The illness began twelve months previously with profuse bleeding after extraction of a tooth, from which time the patient had been getting weaker and weaker, and had lost much weight. He suffered frequently from epistaxis. On his admission the patient was described as looking cachectic and very ill, and extremely pale, with a flush on the cheeks; the temperature, was 103° F. He was spitting some blood-stained fluid, but it appeared to come from the gums. There were no conditions in the chest or other parts of the body, excepting the abdomen, which anæmia would not account for. In the abdomen a very large spleen was found which was slightly tender to the touch. Examination of the blood showed that the red corpuscles were much reduced, as was also the hæmoglobin, and though the white cells were increased they were not more than the fever would account for. It was obviously not a case of leucocythæmia. A daily account of the case was given, but there was nothing special to note except the maintenance of high temperature and the progressive loss of strength. A few attacks of epistaxis occurred and there was a little bleeding from the gums. On Nov. 27th two large hæmorrhages were discovered in the retina which had not been there before. On Jan. 3rd the patient, who had been hoarse for some time, developed œdema of the larynx. The dyspnœa became so urgent on the 5th that tracheotomy had to be performed. The wound took on an unhealthy action from the first and frequent oozing took place from its surface, which on the 8th was severe enough to require plugging. On the 10th hæmorrhage broke out afresh, blood appeared to be sucked into the trachea, and the patient died in a few minutes. A post-mortem examination was made, but there was nothing notable to record except the condition of the liver and the spleen. The liver weighed ninety-three ounces; on microscopical examination the interstitial tissue was found to be slightly increased. The spleen weighed seventy-six ounces, was very soft, and contained one infarct; microscopical examination showed that there was a condition of slight cirrhosis, affecting especially the Malpighian bodies, which were decreased in size. Neither liver nor spleen gave the iron reaction. There was a form of profound anæmia, progressive in character, of no long duration, associated with great enlargement of the spleen, but without leucocytosis or enlarged glands. The disease was very rare and peculiar in its character, and therefore deserved a special name. It had been described under various names: splenic anæmia commonly, in this country; splenic cachexia, splenic pseudo-leukæmia, lymphadenoma-splenica, and also spleno-megalie primitive. There were three stages in the disease; the first, that in which the symptoms were merely those of gradually increasing weakness, with occasional pain in the splenic region; the second, where the anæmia became more marked, and the spleen greatly enlarged; and the final stage, that of cachexia and death from asthenia. It was in the second stage that most of the patients came under observation, and they were then found to suffer usually from severe attacks of pain in the splenic region, paroxysmal in character and somewhat like colic. The temperature was raised to 102° F. or more and the spleen was found considerably enlarged. The blood changes were not characteristic and were not different from those of grave anæmia of simple origin, and no parasites had been discovered. Bleeding from various parts was very common and especially from the nose, but sometimes also from the stomach and bowels. In the later stages the hæmophilic condition was usually pronounced, but the patient generally died of exhaustion. The disease appeared to be continually progressive and of comparatively short duration—twelve months or so. The diagnosis was easy but the cases were rare. The disease might occur at any age, but it was commonest in adults and in males. The causes were unknown. The morbid anatomy seemed to show that the only two organs affected were the liver and spleen. In the liver slight cirrhosis was usually found, and in the spleen also a condition of cirrhosis which affected especially the Malpighian bodies. These might be completely surrounded by fibrous tissue and atrophied. These changes in the spleen were not found in any other form of anæmia with which we were at present acquainted. The peculiarities of the present case were (1) the acute onset and short duration; (2) the hæmophilic condition which developed so early; (3) the œdema of the larynx, which necessitated tracheotomy; and (4) the elevation of temperature, which was continuous as long as the patient was under observation. The number of cases recorded was very small, probably under twenty. The claim that these cases formed a definite clinical group of anæmia must, he thought, be regarded as fully established. The case was brought forward partly on account of its interest and rarity and partly with a view to discussion of these peculiar and grave forms of anæmia.

Brigade-Surgeon-Lieutenant-Colonel KENNETH MACLEOD said that last February a child aged seven was brought to him with splenic enlargement for him to determine whether it was malarious or otherwise. The boy was born in this country of healthy parents and went over

to live in a suburb of Calcutta from 1889 to 1892, in which latter year the patient returned home. There was no history of malaria in India. In 1894 the child had attacks of fever here which were followed by sweating and there was progressive enlargement of the spleen. The result of a careful examination convinced him that the case was one of non-malarial enlargement of the spleen, but he regretted that he had made no examination of the blood. There was absence of improvement under anti-malarial treatment, so arsenic and iron had been given internally, iodine applied locally, and the patient sent to the seaside.

Dr. COUPLAND remarked that the whole point about these cases was the absence of leucocytosis. The subject was novel to a certain extent, but many physicians had seen cases of progressive splenic enlargement without leucocythæmia. He referred to the case of a married woman aged forty-three whom he had seen with Dr. Albert Wheeler of Honor Oak. There had been an attack of acute rheumatism in 1870, and after her second child was born she had a severe attack of "ague," but it never recurred. A swelling in her left side was noticed in the beginning of 1888, and in the November of the same year the spleen was considerably enlarged. There was no excess of leucocytes in the blood, and there was never any marked anæmia. She went on year by year with occasional pain and diarrhœa and she gradually sank, emaciated, dying of asthenia in November, 1890. At the post-mortem examination there was enormous enlargement of the spleen with extensive hæmorrhages into its substance; its tissue was firm. He had read Banti's paper, pointing out the advantages of splenectomy in these cases and he regretted that he did not recommend splenectomy in this case. About four years ago a woman came into the Middlesex Hospital with anæmia, weakness, and enlarged spleen. Under treatment she improved slightly and was sent home. She returned later with a relapse and Mr. Gould removed the spleen. For a year or two she improved greatly and passed into a condition of plethora. Two years later she returned to the hospital bleeding from the rectum, and some internal hæmorrhoids were removed. Six weeks ago she came back again very ill indeed, bleeding from the stomach and bowel. At the necropsy the source of the hæmorrhage was found to be varix of the œsophageal veins and dilated veins in the lower bowel. There was ascites and the liver showed evidence of advanced syphilis, the presence of which raised doubts as to the case being one of the class under review.

Dr. PYE-SMITH said that years ago Dr. Wilks had described these cases fully and carefully. Two years ago he saw a patient who was a fine healthy-looking man who had a large spleen and suffered from hæmorrhages, but there was no leucocythæmia. The case proved fatal. The natural associants of this disease pathologically were the other profound anæmias. In the whole group would be found diminution of red corpuscles, liability to hæmorrhages, intermittent pyrexia, and a fatal termination. In the treatment of them iron, quinine, and iodide of potassium proved useless; phosphorus was pernicious; arsenic occasionally did good, and the only treatment that cured was the early removal of the spleen. The relationship with malaria was not a pathological one, the resemblance being confined to the clinical aspect.

Dr. GALLOWAY referred to a case he had seen at the Great Northern Hospital with Dr. Clifford Beale. At the necropsy six or eight large, firm vegetations, were found round the aortic orifice, and a diagnosis of ulcerative endocarditis had been suggested during life.

Dr. NORMAN MOORE mentioned the case of a child under his care, a boy aged ten years, whose spleen was very much enlarged, the liver being also enlarged. There was slight ascites, and there had been one copious attack of hæmatemesis. He had been under observation for two years, and there was no leukæmia or amyloid disease and the boy had not lived in a malarious region. A cardiac murmur was present. He had thought that the condition was a form of congenital syphilis, but this was negatived by the history. He asked whether Dr. West considered the duration of the disease an essential point.

Dr. F. TAYLOR mentioned the case of a girl aged thirteen in whom the symptoms had lasted already for four years. Paroxysmal pain was first noticed on the left side and swelling shortly afterwards: a year later the patient was noticed to be anæmic. When admitted later to Guy's hospital the spleen was greatly enlarged; there were apical systolic and pulmonary basic murmurs, and the red blood corpuscles were diminished in number. No parasites were found in the blood, and the patient had not lived in a malarious district. The patient was three months in the hospital, and there was no approach to pernicious anæmia during that time. The actual increase of leucocytes was small; treatment produced no material change, and the parents declined splenectomy. The patient died after the disease had lasted four and a half years. Two years ago a medical man came under his observation who was suffering from marked anæmia. He was taken ill in November, 1893. For two years he had noticed something wrong in the left flank; he had been taking arsenic without avail, and inhalations of oxygen were tried, under which he appeared to improve. There was no excess of white blood corpuscles; there was a scaly eruption on the palm and a tender nodule on the tibia, but he did not admit having contracted syphilis. He was still alive but was not working, and so the duration of his illness up to the present was nearly four years. One important outcome of these observations was that the diagnosis of leucocythæmia was not to be made without an examination of the blood. If syphilis were a cause of enlargement of the spleen it could only operate through cirrhosis of the liver or amyloid disease. He mentioned another case which came under his care in 1893 for hæmatemesis. The patient was a lad aged sixteen who had never taken alcohol. On examination the spleen was greatly enlarged, and there was much anæmia; the blood showed no excess of white corpuscles, but the red corpuscles and hæmoglobin were both deficient. He improved and went out of the hospital. In October, 1895, he was still pale; the blood was examined and there was no leucocytosis. In February of the present year he again suffered from hæmatemesis, which rendered him very anæmic; the spleen was still enlarged and there were retinal hæmorrhages and optic neuritis. The blood was as before, but later the white corpuscles had increased in number but not sufficiently yet to justify the case being regarded as one of leucocytosis.

Dr. LESLIE MURRAY said that in certain cases there was a distinct diminution of leucocytes and there was no anæmia. He referred to a case which lasted twelve months; diarrhœa was present, which necessitated the stoppage of the arsenic, and there was occasional pyrexia with gradually progressive asthenia. The spleen weighed over 6 lb. and showed recent and old hæmorrhages and infarcts, but no cirrhosis. The liver was twice its normal size and contained minute nodules between the lobules like points of granulation tissue. The whole of the solitary glands and Peyer's patches were also enlarged. Iodide of potassium had a good effect and diminished the spleen by two inches. Another case from the same place—a marshy district of Scotland—came to him three months later, in which the fatal result was due to septic peritonitis.

Dr. KANTHACK said that he had made a mistake in the description of Dr. West's case, for there was a distinct increase of fibrous tissue in the spleen. The blood in these cases should be carefully examined and the white corpuscles catalogued according to the commonly accepted code. Cases of splenic anæmia occurred in children and adults. In children considerable leucocytosis was often present though not amounting to leucocythæmia. In adults leucocytosis was not present normally. Rachitic and syphilitic conditions in children might be associated with severe anæmia and thus a condition might be established indistinguishable from splenic anæmia. In the adult cases pathology still left them in the dark. He thought that splenectomy was not a good operation in these cases, for so far as pathological teaching went the spleen in these cases was rather a compensatory organ than the seat of the disease.

Mr. PEARCE GOULD protested against the value of splenectomy being judged by the prevailing pathological view of the disease. The cases ought to be judged on their merits, and Banti's results could not be set aside by any theoretical considerations as to the nature of the affection.

Dr. JOHN HARLEY asked whether there was any connexion between the endocarditis and the splenic affection, for several observers had noticed the coincident existence of the two diseases.

The PRESIDENT asked if there were any antecedent history of malaria.

Dr. WEST, in reply, said it would be useful to have cases like that related by Dr. Coupland recorded in the Transactions beside his own. There was no history of malaria or of syphilis. One of the cases related by Dr. Murray was

evidently Hodgkin's disease. No organisms had ever been discovered in connexion with these cases. The diagnosis of these cases was often extremely difficult and he would hesitate before adopting so heroic a procedure as splenectomy for this disease.

ISLINGTON MEDICAL SOCIETY.

Two Deaths from Coal-Gas Poisoning.—Ulceration of the Tongue and Mouth.—Uneventful Midwifery (4700 cases).—Needle in the Wrist and Roentgen Rays.—Obscure Case of Perforating Ulcer of the Stomach.

THE last meeting of this society was held at 25, Highbury-place on May 26th. The following is a brief report of the proceedings:—

Mr. JOHN T. JACKSON read notes on two cases of Fatal Coal-gas Poisoning. Two servants, the elder aged fifty-six years and the younger aged fourteen years, were in the habit of sleeping together in a small, badly ventilated bedroom without a fireplace, and in which there was a gas-bracket by the window. They were forbidden by their mistress to use the gas and were supplied with a small safety oil-lamp and a candlestick. On the morning of April 25th, about seven o'clock, as they did not appear to be getting up at the usual time, their mistress went up to their bedroom and immediately smelt a strong smell of gas, and upon their door being opened found the room full of it. One of the sons coming to her assistance opened the window and turned off the gas-tap, from which it had been escaping. Upon looking round they saw the elder patient lying half out of the bed and dead, but seeing that the younger one was still breathing they carried her into the next room, placed her on the bed, and opened the window. Mr. Jackson was summoned a little before 8 A.M. and found the woman dead, so he attended to the girl immediately. He found her lying on the bed quite unconscious, with the pupils widely dilated, the conjunctivæ injected, and the extremities cold. The face was pallid, but not dusky, neither were the lips. The breathing was quick, but not laboured, and the pulse was quick and feeble. Hot bottles were applied to the feet and legs and blankets thrown over them and mustard plasters to the chest, the heart, and the back of the neck. She was given some sal volatile and water by the mouth without difficulty. Shortly afterwards convulsions came on affecting the facial muscles, with closure of the jaws and also both arms and hands. The legs did not appear to be affected. With the assistance of another practitioner, who had also been called in, artificial respiration was performed for a time, but as there seemed to be no difficulty in breathing this was left off. Hot coffee was given per rectum, and as the convulsions still continued bromide of potassium and brandy were injected by the rectum at intervals of three hours. The convulsions were accompanied by restlessness and some moaning. There was no return of consciousness, and she remained in this condition until 6 30 P.M., when the breathing became more hurried, she coughed up blood-stained, frothy mucus, her face became covered with perspiration, and the pulse becoming more rapid she died about 10 P.M. There was no post-mortem examination. On examining the servants' room the candle was found quite burned down in the candlestick. The supposition is that the woman had been sitting up late, burnt out the candle, had lighted the gas and had not properly turned it off, or in attempting to do it had turned it slightly on when the flame went out. Similar incidents were mentioned by other members.

Dr. A. REID brought forward some notes on Ulceration of the Tongue and Mouth (stomatitis, cancrum oris, &c.), which he said were common enough in children but not so frequent in adults. A case occurred in a woman aged twenty-two years, to whom he was called on April 11th last. He found the patient (recently married) looking very ill, anæmic, and generally run down. There was a thin, quick pulse and the temperature was 101° F. The tongue was very foul and the characteristic fœtid breath of stomatitis was present. There was loss of appetite and sleep. On examining the mouth the tongue was found to have a thick, yellow fur; it was not very swollen; the gums were spongy with spots and superficial ulcerations. Nothing was observed on the inside of the cheeks. Dr. Reid ordered a calomel aperient, a mixture of chlorate of potassium, and mouth washes of chlorate of potassium and Condy's fluid to be used alternately. He insisted on a liberal supply of nourishing soup and wine or brandy. She did not improve for several days. Her tongue got more fixed and she could not articulate. He then found a slough forming along the left side of the tongue. She was unable to use the mouth washes thoroughly, so glycerine of borax was applied with a brush. The slough slowly separated and the tongue healed. Under citrate of iron and quinine with strychnine, combined with liberal feeding and painting the gums with iodine, she recovered rapidly and perfectly.

Mr. JAGO read a paper on Uneventful Midwifery (4700 cases), in which he gave the following particulars. The term "uneventful" as applied to midwifery could, of necessity, only be used in a comparative sense. How far he was justified in adopting it as descriptive of his own experience must be left to the judgment of the members. He had gathered the records of rather more than 4700 cases extending over a period of twenty-three years, the lowest number attended in one year being 19 and the highest 295. He regretted that he had not kept a methodical table of the different presentations, the use of instrumental aid, versions, &c., the cases being of no use in the matter of definite statistics. The chief "events" in Mr. Jago's practice, however, were very clear in his memory and are briefly related as follows. The main consideration in obstetrics is, he considered, the death-rate, and he had to record nine deaths. Two deaths were in cases of advanced phthisis and were not primarily due to the puerperal state. Two were from hæmorrhage, one a case of placenta prævia and the other of concealed accidental hæmorrhage. One death was probably the result of embolism and one distinctly due to privation. The remaining three cases were of septic infection. Of the last, two happened quite twenty years ago, and the third in 1892. This last case was of peculiar interest and taught a very definite lesson. The patient was a woman aged thirty-eight years with her first child. The labour was hard and instrumental, but in no way unusual. She did very well until the fourth day, when symptoms of septic infection became manifest, and she died on the eighth day after delivery from puerperal peritonitis. The child was circumcised on the same day, and on the fourth day afterwards was seized with pyrexia, sickness, tenderness in the right iliac region, tumefaction of the abdominal walls, &c., and died on the eighth day after circumcision from what Mr. Jago considered septic peritonitis. The importance of this case lies in the fact that the drains in the area of the next house (which was unoccupied) were exposed for the construction of an intercepting trap; the lying-in room was in the front of the house, and the month being July the windows were kept constantly open. Only once had he had occasion to perforate the cranium, and in this case he thought it would not have been necessary had the use of chloroform not been prohibited on account of bronchial complications. He had seen three cases of placenta prævia. In one case, as already stated, the patient died. In the second the labour was completed before his arrival, the placenta having been expelled in front of the head of the child. In the last case delivery was safely effected by the adoption of Dr. Barnes's recommendation. In all the cases the children were stillborn, the period of confinement being about the eighth month of pregnancy. He only recalled one case of prolapsed funis, and in this the child was stillborn. Once only had he seen a shoulder presentation, or at least he presumed the shoulder presented. He was called to the case by a midwife, who had apparently been pulling on the arm in the hope of effecting delivery. Three times he had had occasion to induce premature labour. In one case of much interest, at the wish of Dr. Fancourt Barnes, who had removed a large ovarian tumour at the fourth month of pregnancy, labour was induced at the seventh month to prevent the weakening of the abdominal walls by the over-stretching of the recent cicatrix. Labour was induced in each by the introduction of the gum elastic catheter. He had to record two ruptures of the perineum through the sphincter ani and for about an inch up the septum. Both were forceps cases; in one the presentation was normal, and in the second face to pubis. One was repaired by the quilled suture, but the result was only partially satisfactory; in the other one deep and four superficial sutures were used, with the best results. This patient Mr. Jago had since attended in four confinements without further mishap. He had no accurate data as regards twin births, but he remembered one case in which one child had evidently died about the sixth month and

was flattened out, taking the distinct curve of the uterine cavity. These facts constituted the exceptional occurrences in his experience. If he might venture to generalise and deduce from them he should like to submit to their consideration two conclusions to which he was led. The first was that clean midwifery need not be ostentatiously antiseptic, and, secondly, that among the lower middle and respectable artisan classes variations from the normal state are comparatively rare.

Dr. GLOVER exhibited a photograph of a Needle in the Wrist shown by the Roentgen process, taken by Mr. W. P. Granville, 36, Oakfield-road, Stroud-green. It was easily removed after being in six months. He also gave particulars of a misleading case of Perforating Ulcer of the Stomach, fatal in sixteen hours from the time of his first seeing it, occurring during menstruation, the pain and peritonitis being most marked in the left ovarian region, where pain had been complained of for weeks. Death occurred from shock.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.

The Climate and Mineral Springs of Bridge of Allan.

AN ordinary meeting of this society was held on May 20th in the rooms of the Medical Society of London, Chandos-street, Cavendish-square, W., the President, Dr. HENRY LEWIS, being in the chair.

Dr. HALDANE read a paper on the Climate and Mineral Springs of Bridge of Allan. He pointed out that the mildness and freshness of the climate, due to the situation of the town on a gentle slope facing south, surrounded behind and at the sides by hills, made it a suitable Scottish winter resort for many invalids, while the waters acted as a mild and safe aperient, diuretic and deobstruent and were used with success in chronic constipation and liver and glandular affections, the treatment and baths being carried on equally well in summer or winter. The baths were found useful in some cases of chronic skin diseases and rheumatism. The "Nauheim treatment" of cardiac affections was now being tested.

Dr. MYRTLE (Harrogate) considered Bridge of Allan more suitable for cases of bronchial irritation and phthisis than any other part of Scotland.

Mr. MOXON (Matlock) and Dr. GILBERT (Tunbridge Wells) considered that the change of climate and mode of life had more to do with the benefit received by patients at Bridge of Allan than the waters.

Dr. TYSON (Folkestone) said that they would do a great amount of good by placing their own health resorts in the proper position they deserved, and they did not wish to push the claims of their own health resorts to the exclusion of foreign spas.

Dr. SOLLY (Harrogate) agreed that it was certainly time to bring before the profession the advantages of their home health resorts, but in doing so they must be careful not to claim too much for any particular resort.

Dr. SNOW (Bournemouth) said that in this country they did not sufficiently minister to the needs of the minds of the visitors by providing suitable amusements. All this must be altered.

Dr. LEONARD WILLIAMS (Sidmouth) endorsed the remarks of Dr. Solly.

Mr. SHIRLEY JONES (Droitwich) also spoke and Dr. HALDANE replied.

Dr. HYDE (Buxton) then moved the following resolution:—"This meeting is of opinion that increased travelling facilities in the shape of specially reduced fares, through communication, and quicker and more frequent train services in connexion with British health resorts are desirable, not only in the interests of such resorts, but also in those of the visitors, and particularly invalids, who have to resort to the spas and watering places in search of health; and the meeting further resolves that the council be requested to appoint a committee to consider the subject with a view to influencing the various railway authorities, and taking such other steps as may be deemed desirable." He showed the disadvantages under which our home resorts laboured on account of the cheaper travelling facilities granted to visitors to continental resorts, giving numerous illustrations. He said that health resorts were not ordinary towns, that the traffic was essentially a holiday traffic, and that the fares should be reduced and other concessions and alterations made as to the length of stay, &c.

Dr. SNOW (Bournemouth) warmly seconded the resolution and said that the railway companies should be approached in the most friendly way, and he thought it would be better to do this through the Councils of the different towns.

Dr. MYRTLE (Harrogate) said that on many lines hunters, golfers, and curlers could travel for reduced fares, and visitors to health-resorts ought to be treated similarly. He pleaded for a better sanitary accommodation in all trains.

Dr. SOLLY (Harrogate) urged the necessity of providing through carriages. Many invalids refused again to face journeys on account of change and long waits.

Mr. MOXON (Matlock) thought that they should certainly lay before the railway companies the points raised by the previous speakers.

Dr. TYSON (Folkestone) was strongly in favour of each district working out its own case with the different railway authorities, because some towns had no complaints to make.

Mr. CUFFE (Woodhall Spa) said that at Woodhall Spa they had approached the railway company some years previously with the greatest success as regarded reduced fares, extended time of stay, and through carriages.

Mr. TREGELLES FOX (Strathpeffer Spa) thought that the suggested improvements would be remunerative to the railway companies, and that the society was entitled to back its propositions with a certain amount of sentimental support.

Dr. LEONARD WILLIAMS (Sidmouth) thought that a committee should be appointed, but should only exercise its influence on application from the various health resorts.

Dr. HYDE, replying, agreed that they could not do much on account of the commercial aspects, but he thought concentrated influence would be more powerful and efficient than that of individuals.

The resolution was carried unanimously.

MEDICO-CHIRURGICAL SOCIETY OF EDINBURGH.

Syphilis Simulating Tuberculosis.—Laryngeal Autoscopy.—Instruments Used by Native Indian Oculists.—The Rôle of the Carbohydrates in Diabetes with an Inquiry into the Constitution of Infants' Food.—Primary Sarcoma of the Liver Simulating Hepatic Abscess.—Opium Poisoning.

THE tenth meeting of this society was held on June 3rd, Dr. ARGYLL ROBERTSON, President, being in the chair.

Mr. CATHCART showed a case of Syphilis Simulating Tuberculosis.

Dr. LOGAN TURNER gave a demonstration on Dr. Kirstein's method of Laryngeal Autoscopy. The principle of the method consisted in bringing the interior of the larynx and trachea *directly* under the eye of the observer without the use of the laryngeal mirror, and hence there was no reflected image. In carrying out the examination there must be a straight line between the aperture of the mouth and the interior of the larynx and trachea. This was obtained by raising the patient's head till it formed an angle of 60 degrees with the axis of the trunk. By depresing the posterior part of the tongue immediately in front of the epiglottis the epiglottis was raised and drawn forwards. The larynx and trachea were illuminated by means of an electric lamp placed in the handle of the autoscope. The instrument required some dexterity in its use, and many patients were quite unable to submit to the pressure required to depress the tongue and draw forward the epiglottis. The instrument consisted of a spatula of nickel-plated palladium, fourteen centimetres long, slightly hollowed out on its upper surface and slightly curved backwards at its distal end, where it was notched to receive the central fold of the glosso-epiglottic ligament. The spatula was fixed at right angles to the handle and was provided with a small sliding plate at its proximal end, thus forming a short tunnel through which the light was transmitted and through which instruments could be passed. The handle was provided with a small electric lamp, the rays from which were directed along the spatula into the cavity of the larynx. The examiner, standing in front of the patient, who was seated in a chair with the head at an angle of sixty degrees with the trunk, introduced the spatula immediately in front of the epiglottis. The handle was then

elevated till the sliding plate came into contact with the teeth of the upper jaw; the epiglottis was thus raised and a view of the larynx and trachea obtained. Cocaine might be used with advantage, but there was considerable variation in the success of the procedure, many patients being unable to stand the necessary pressure. If successful a very good view of the larynx and trachea was obtained. Dr. Turner did not think that autoscopy could take the place of ordinary laryngoscopy, but it was very useful in children where an anæsthetic was used.

The PRESIDENT showed specimens of the Instruments used by native Indian Oculists for couching cataract, which had been sent by his friend Dr. Jennings. An ordinary bleeding lancet was used for the incision, and the lens shot out with one of the instruments shown which consisted of a bayonet-shaped blade made of coarse metal.

Dr. ATTCHISON ROBERTSON read a paper on the *Rôle* of the Carbohydrates in Diabetes with an Inquiry into the Constitution of Infants' Food. Having glanced at the part played by the carbohydrates in diet he next considered the digestion of starch by the saliva and in pancreatic digestion. In infants the secretion of saliva was small and the diastatic ferment small in amount. Little starch could be digested. At the end of the first year diastatic property reached a maximum. The best food for infants was mothers' milk. Many children were fed on condensed milk, but he thought children fed thus were liable to gastro-intestinal troubles and convalesced from illness more slowly than those fed on mothers' milk. The sweetened variety of condensed milk was most used, but contained much added sugar. These milks were not to be recommended. He had examined specimens of various artificial foods after preparation according to the directions given and not as found commercially. He concluded that most consisted of wheaten flour mixed with malt. In many the preparation with boiling water prevented the conversion of the starch. Instead of malt some contained pancreatic ferment, but in the ordinary feeding of children it was not necessary to digest the proteid matter for proteid was well digested by children. In some of the foods the starch had been fully converted by the diastase of malt into dextrines. Combinations of starch and dextrine were present in some foods. If these dextrinised foods were properly prepared they formed a valuable addition to the milk with which they were used. Almost all the artificial foods were deficient in fat, so cream should be added in their preparation. Dr. CARMICHAEL, Dr. BLACK, Dr. GILLESPIE, Dr. JAMIESON, Dr. BURN MURDOCH, and Dr. RITCHIE took part in the discussion which followed.

Dr. BYROM BRAMWELL read notes on a remarkable case of Primary Sarcoma of the Liver which simulated hepatic abscess. The patient, a young woman aged twenty-five years was admitted to the Royal Infirmary, Edinburgh, suffering from debility, emaciation, and pain in the right side of the chest. When admitted to the hospital dulness was found posteriorly with the typical curve of a pleural effusion. A hypodermic needle was inserted by the house physician, but no fluid was obtained. When the patient was examined while lying on her back it was at once noticed that the lower part of the chest on the right side was bulging and that the heart was displaced upwards. There was great pain in the fifth interspace in the right mammary line. A fluid enlargement of the liver was suspected. The needle of an aspirator was inserted at the painful point in the fifth interspace and some dark chocolate-coloured fluid was obtained. Hepatic abscess was diagnosed, although it was remarkable that the patient had never been out of the country, never had dysentery, nor could any cause for the abscess be discovered. Fifty-three ounces of dark chocolate-coloured fluid were drawn off with the aspirator. The fluid contained much more blood than would have been expected in an abscess. The microscope showed leucocytes, blood corpuscles, and debris of broken-down cells, but no characteristic cells could be found. She remained easier for some days, but the side became distended again and all her urgent symptoms returned. Mr. Cotterill operated and incised a large cavity and introduced a drainage-tube. She was much relieved, but blood continued to leak through the tube and produced profound anæmia. The tube was removed ice bags applied, and various remedies tried, but the bleeding continued. Mr. Cotterill decided that the only procedure possible was to sew up the opening, which was accordingly done, and pressure applied. The bleeding stopped, but the cavity filled up again and had to be aspirated. The patient died a month after admission to the hospital, no other disease having been found in any other part of the body.—Dr. LEITH gave a description of the pathological conditions present. On cutting into the liver a large cavity was found occupying more than half the bulk of the organ. It contained broken-down blood-clot. Around were isolated centres of growth. The liver weighed about 9lb. It was an example of the rare condition, primary sarcoma of the liver, consisting of spindle cells with some giant cells. The specimen and photographs were shown.—Dr. AFFLECK thought the case well illustrated the difficulties in diagnosing hepatic tumours. He remembered the case of a woman who was treated for typhoid fever for three months before being sent to the infirmary. On admission a swelling was found in the hepatic region. It was aspirated and some chocolate-coloured matter removed. The symptoms were so urgent that Mr. Duncan incised and found a large cavity containing grumous chocolate-coloured matter. The patient died and post mortem an abscess of the liver was found, which communicated with the stomach through a sinus leading to an old gastric ulcer.

Dr. JAMES RITCHIE read notes on two cases of Opium Poisoning. In the first case a catarrhal condition of the stomach was present, and when the stomach tube was passed seven hours after the laudanum had been taken a very considerable quantity was found in the stomach. The second case was treated with permanganate of potash, with very satisfactory results.

Reviews and Notices of Books.

Researches into the Anatomy and Pathology of the Eye. By E. TREACHER COLLINS, F.R.C.S. Eng., Assistant Surgeon to the Royal London Ophthalmic Hospital, Moorfields; and Hunterian Professor to the Royal College of Surgeons of England, 1893-94. With 10 Plates and 28 Figures in the Text. London: H. K. Lewis. 1896. Pp. 140. Price 6s.

THE volume before us, though of small compass, represents a very large amount of careful work. Mr. Treacher Collins held for several years the post of Curator of the Museum at the Royal London Ophthalmic Hospital, and had then as part of his duties to examine and report upon enucleated eyes, tumours, and pathological specimens generally. As the surgical staff of that hospital is large, the patients numerous, and operations frequent, he had extensive opportunities of observation, and of these he has taken advantage in a way highly creditable to his skill and industry, and has produced a work which, although by no means an exhaustive treatise on the pathology of the eye, yet treats of many subjects, and of each in so original and interesting a manner that the several chapters will be read and re-read by every ophthalmic surgeon, and will form the basis of the pathology of the eye in the text-books on the points with which he deals for some time to come. In the summer of 1894 Mr. Collins delivered a course of lectures as Hunterian Professor at the Royal College of Surgeons of England on the Development of Various Parts of the Eye, which he has reproduced here with much additional matter, consisting chiefly of the effects of concussion on the eye and the pathology of cysts of the iris.

In the first chapter he dwells at some length on the development of the suspensory ligament of the lens, showing that the fibres of which this ligament is composed are, in the first instance, cellular adhesions passing between the sides of the lens and the ciliary processes, and that as growth proceeds the cells lose their nuclei and become fibres. The absence of such fibres enables an explanation to be given of the condition known as coloboma lentis and ectopia lentis. He discusses the origin of true anterior polar cataract, a name he restricts to those opacities which are immediately posterior to the anterior capsule, and shows that they are formed by the proliferation of the cells lining the capsule, though after some time a hyaline layer is formed between the

proliferated cell mass and the lens substance, the anterior capsule in such cases appearing to split at its periphery of the neoplasm into two layers. He agrees with the late Mr. Hulke in thinking that another form of anterior polar cataract may result from perforating ulcer of the cornea and the temporary contact of the prominent surface of the lens with the flaccid cornea. The second chapter is chiefly occupied with the histology and pathology of zonular cataract and the etiological relation between this kind of cataract and rickets. He appears to think that the evidence at present obtained is in favour of the connexion of the two diseases. A short section is devoted to the development of the vitreous humour which he finds in a specimen from a fœtus believed to be about at the tenth week in the form of a thin layer separating the posterior surface of the lens from the inner layer of the secondary optic vesicle. A definite hyaline membrane is already present and the rudimentary vitreous is composed of a network of fine fibres with granules lying on them, the interspaces being filled with a clear fluid; he gives several drawings of sections of the central artery of the vitreous. The author devotes a chapter to Cysts of the Iris, a rather rare but very interesting form of disease. The first recorded case is that by Mackenzie, who noticed that the little tumour was preceded by a wound. In 1860 D. A. V. Guépin, in collating the various cases that had been reported up to that date, drew attention to the fact that cysts of the iris were generally, if not always, preceded by a punctured wound, and the correctness of his statement has received the support of all succeeding observers. The precise pathological conditions that lead to the formation of cysts of the iris are fully given by Mr. Collins. In some instances eyelashes have been translated by the instrument inflicting the wound into the substance of the iris, and the conclusion was drawn that the cysts in such cases proceed from the rootsheath: but in 1869 Mr. Hulke, after collecting the details of nineteen cases, suggested that a part of the membrane of Descemet might in some instances have been torn off and applied to the surface of the iris. Mr. Collins, however, points out that "cysts of the iris which follow wounds of the eye are, as a rule, found to be lined by laminated epithelium, and it seems," he thinks, "more probable that it is the surface epithelium which is implanted and which forms the starting point of the cyst rather than the endothelium on Descemet's membrane." This view is in accordance with the experiments of Masse, who produced both epithelial, pearl-like tumours and true cysts by grafting on the iris of rabbits' eyes fragments of conjunctiva and skin, and it is fully borne out by the microscopical examinations which have been made by Mr. Treacher Collins himself, of which he gives many original drawings.

In speaking of glioma of the retina Mr. Collins states that, although he has not made a special study of the retina, he has observed that the layers of the retina are quite undifferentiated in the human fœtus at the third month and that the retinal cells at that period are very similar in appearance to those which compose the mass of a glioma, the majority being rounded with large nuclei and some having minute spicules. He rightly observes that the differences between glioma and sarcoma are constant and well marked, glioma occurring in infancy or early childhood, affecting both eyes in 20 per cent. of the infants attacked and not recurring after removal if three years have elapsed; it is rarely associated with secondary growths, and arises from tissue of epiblastic origin, the cells being rounded with large nuclei and occasionally with spicules, whilst sarcoma may occur at any age, is never bilateral, is frequently followed by secondary growths, often presents fusiform as well as round cells, and arises from mesoblastic tissue.

In regard to the hyaline nodules which are to be met with in pathological specimens on the inner surface of the membrane of Bruch, Mr. Collins is inclined to believe that they are an excretion from the pigmented epithelial cells of the choroid, and attributes the formation of the membrane of Bruch itself to the same cells.

Referring to the difficulties that present themselves in explaining the occurrence of glaucoma, he proceeds to discuss the conditions which may lead to that affection in eyes in which the iris is partially or wholly absent; in those affected with buphthalmos, in cases occurring after cataract, in cases of traumatic aniridia, and in cases of recurrent glaucoma after iridectomy. He shows that in almost every case microscopical examination demonstrates that the glaucomatous symptoms arise from narrowing of the angle between the iris and cornea and consequent interference with the drainage of the aqueous humour. The drawings illustrating this are well executed. Mr. Collins may be congratulated both on the novelty and the value of his work.

The Histo-pathology of the Diseases of the Skin. By Dr. P. G. UNNA. Translated from the German by NORMAN WALKER, M.D. Edin. Edinburgh: William Clay. 1896. Price 31*s.* 6*d.* net.

THE publication of this work marks an important episode in dermatology. Nowhere but in Germany could an author have been found to undertake a work of such magnitude, 1205 large octavo pages, on the pathology of a single branch of medicine, and although Gustav Simon in 1848 (not 1840 as stated in the preface) undertook a similar task, both dermatology and histology were then in their infancy and the ground to be covered was therefore much less. Dr. Unna, indeed, does not now pretend to cover the whole ground of the histo-pathology of the skin. This would be far beyond the power of a single individual, who has aimed not at a compilation from the labours of others, but to go through *de novo* as much as he could by his individual efforts and those of his pupils working under his supervision. The work is divided into six sections: (1) Anomalies of Circulation; (2) Inflammation; (3) Progressive Disturbances of Nutrition, corresponding to what are usually classed as neoplasms, but including also pigmentations; (4) Regressive Disturbances of Nutrition, including Degenerative and Atrophic Changes, Gangrene, &c.; (5) Malformations; and (6) Saprophytes and Foreign Bodies—the saprophytes including a few vegetable parasitic diseases, and the foreign bodies being represented only by argyria. As might be expected, Sections 2 and 3 take up three-fourths of the entire book, 600 pages being occupied with the different forms of inflammation.

The author has very wisely prefixed a short clinical description of the affection he is about to consider pathologically. This enhances the value of the book to the general reader, and would be, indeed, necessary in many instances to the dermatologist, so that there should be no mistake about the eruption examined. It is the more essential in this work, as the author never hesitates to re-christen a disease, however generally recognised its original name may be, if he considers it may be more accurately described from a pathological standpoint. This is much to be regretted, for the multiplication of designations for the same disease by different authors has been the bane of dermatology in the past and has done much to hinder progress. No author can claim to be final in his views as to the pathology of any eruption, and as revision of pathological theories is constantly going on if every generation of pathologists should consider itself entitled to alter the names already in vogue because they express a possibly exploded theory of its pathogeny, it is obvious that there will be no finality. All old-established names are better left simply as labels, which may be quite distinctive even if they are not pathologically sound.

We do not intend to discuss the author's views of the individual diseases of which he treats. This would involve a general analysis and go far beyond the scope of a review

Everywhere he states the grounds on which he draws his conclusions and points out where he differs from previous authors, and he gives most of the recent bibliography at the end of each article. It remains for the reader to weigh for himself the facts with the conclusions and form his own opinion according to his judgment founded on clinical and pathological experience. Whatever the result in individual instances there can be no question that the author has done a profound service to dermatology and has not only laid a broad foundation but erected much of the superstructure which the now numerous band of young and enthusiastic workers can assist to complete.

The work should be read carefully by every dermatologist who wishes to keep abreast of his subject, and every practitioner who is interested in diseases of the skin will never regret having devoted some of his spare time to perusing the more general pathological portions of the work.

Much praise is due to the translator, Dr. Norman Walker, who has executed a difficult and arduous task in a very creditable manner. The work is done into very readable English, and it is only where there was no exact equivalent in English for some of the new pathological terms that it is observable that the work is not originally an English one. It has also some advantages over the German edition. Dr. Unna has seized the opportunity "to make certain alterations and emendations of the original," and at Dr. Norman Walker's suggestion illustrations have been freely introduced, so that there is a double plate of nineteen coloured figures prefixed and forty-two well-executed woodcuts in the text. The publisher's share in the production of the work leaves nothing to be desired, and author, translator, and publisher are to be congratulated on their enterprise in undertaking and success in producing such an important and valuable work.

The Pathology and Treatment of Venereal Diseases. By ROBERT W. TAYLOR, M.D., Clinical Professor of Venereal Diseases at the College of Physicians and Surgeons, New York. Pp. 1000. Edinburgh and London: Young J. Pentland. 1896.

THE first thing which strikes the reader of this bulky encyclopædic work on venereal diseases is the space allowed to gonorrhœa and its complications, immediate and remote, these alone taking up half the book, or rather more than is given to syphilis and its sequelæ. This well illustrates the change which has come over modern views with regard to these complaints. Gonorrhœa is no longer regarded lightly by the surgeon, as the serious character of sequelæ in women as well as men has been so prominently brought forward in recent years. The work, as we have mentioned above, is of an encyclopædic character. Dr. Taylor does not confine himself to his own experience and observation, but gives, often with tedious fulness, the views of others, even when they have been long exploded. If a second edition should be required the pruning-knife must be freely employed; moreover a separation of the work into two volumes would make it much more convenient. We hope also that some of the histories (often quoted from other authors), which are given in the book will be reconsidered before they are admitted into a future edition in their present form. The work begins with a consideration of gonorrhœa in the male. A description of the anatomy of the parts is followed by an admirably clear account of the gonococcus and its life history and a very judicial consideration of the importance to be attached to its presence or absence in stained specimens of the discharge. With reference to subacute and chronic cases the author says: "But the doubt comes in in subacute and chronic cases, just the ones in which we are anxious to determine whether the long-drawn-out inflammation is really kept up by the gonococcus, and whether this micro-organism has, as it is claimed it has, an indefinite life as a morbific agent in the male urethra. It will be very readily seen that the bacteriological studies of the urethral secretions are very difficult, intricate, and attended at every step with liability to doubt, confusion, and error; consequently scepticism and conservatism are warranted, indeed are essential, even in the presence of statements made by experienced and skilled observers." The morbid anatomy of chronic gonorrhœa and of stricture is clearly described and well illustrated, and the symptoms, complications, and treatment of gonorrhœa in the male are given in great detail. Gonorrhœal ophthalmia is also well described and the treatment very clearly indicated. The sequelæ, such as gonorrhœal rheumatism, general pyæmia, endocarditis, &c., are clearly described and references given to recently published papers. The late local effects, such as stricture, are very fully considered. Gonorrhœa in the female and the sequelæ of pelvic inflammation and suppuration receive the full attention that their recently recognised importance demands, and this section of the book concludes with an account of the conditions often met with as accompaniments of gonorrhœa, balanitis, phimosis, and paraphimosis, and there is also an excellent account of vulvo-vaginitis frequently met with in children, which Dr. Taylor agrees with most English observers in regarding as usually non-specific.

The section on Chancroids is adequate and the coloured plate accompanying it is excellent. Iodoform in America, as here, is the application chiefly relied on.

The section on Syphilis occupies the second half of the book, and so far as the account of the primary and secondary stages is concerned is excellent. The morbid anatomy and the various modes of infection are considered and a good account of the appearances of the chancre and its variations according to its site are given, the letterpress descriptions being here much superior to the coloured plate. The general symptoms—fever, albuminuria, and cutaneous affections of the secondary stage—are fully and clearly described, as are the secondary affections of the eye and ear. The treatment of syphilis in the primary and secondary stages is considered at great length. We are surprised to find Dr. Taylor emphatic in advising postponement of mercurial treatment after a chancre has been diagnosed until undoubted secondary symptoms occur. Nothing seems to be gained by this delay except, as Dr. Taylor suggests, that the alarm experienced by the patient will make him willing to undergo the prolonged course of treatment necessary. Dr. Taylor is a strong advocate of mercury. Although admitting the efficacy of inunction he seems to find it resented by patients, and administers mercury in the form of the green iodide or tannate in pill for six months, suspending it when there is trouble with the gums or bowels. Soon after this he adds to the mercury iodide of potassium, giving a mixture containing the perchloride of mercury and iodide of potassium throughout the secondary stage.

The consideration of tertiary syphilis and of congenital syphilis is meagre and unsatisfactory as compared with other parts of the subject. In another edition the book would be greatly improved by an amplification of these sections and compression of the chapters on treatment. The writer has given the views of others very fully, often only to discountenance them. The book would be more useful if antiquated methods were expunged and the results of the writer's own extended experience given more prominently. With these slight qualifications we are able to express nothing but admiration for the work.

The descriptions are clear, the illustrations for the most part accurate and helpful, and the fulness and detail with which the subject is treated make the book one of the most useful works of reference that the busy practitioner can keep on his shelves.

The Diseases of Children's Teeth: their Prevention and Treatment. A Manual for Medical Practitioners and Students. By R. DENISON PEDLEY, M.R.C.S., L.D.S. Eng., F.R.C.S. Edin., Dental Surgeon to the Evelina Hospital for Sick Children, Southwark. With numerous Illustrations. London: J. P. Segg and Co., Regent-street. America: The S. S. White Dental Manufacturing Company, Chestnut-street, Philadelphia, Pennsylvania, U.S.A. Price 7*s.* 6*d.* 1895.

THIS book is written by a dental surgeon who has had an unusual experience in the subject of which he treats and who is already known to the profession by his careful investigations into the condition of the teeth of children in our large pauper schools. It is designed for the use of general practitioners in medicine, who are not infrequently consulted about the teeth of children and are often so situated that they have to supply the place of a dentist. There is, perhaps, a tendency on the part of students to neglect the dental department of their hospital, and this book is well adapted to assist them in the requirements of active practice. The book is divided into eight chapters, which treat of the structure of teeth; eruption; caries; inflammation of the pulp; inflammation of the periodontal membrane, periodontitis, alveolar abscess, necrosis, and other sequelæ; irregularities of the teeth; hygiene of the mouth; and treatment. Whilst not too diffuse there is enough said on the various subjects treated of to enable the practitioner to gain a fair working knowledge of the subject, and the practical suggestions made regarding treatment should enable him to do much more than extract teeth for the relief of pain. The illustrations are numerous and adequate; in the chapter dealing with irregularities of the teeth they are even too numerous and take up too much space. There is a good index. Mr. Pedley may be congratulated on having written a useful book, and one which supplies a want in the profession.

Analytical Records
FROM
THE LANCET LABORATORY.

SCOTCH WHISKY, "BIG BEN" BRAND.

(JAMES S. DENMAN AND CO., 20, PICCADILLY, W.)

AN analysis of this sample gave the following results: alcohol, by weight 40·30 per cent., by volume 47·67 per cent., equal to 83·54 per cent. proof spirit; extractives, 0·16 per cent.; mineral matters, 0·02 per cent.; acidity, calculated as acetic acid, 0·03 per cent. The whisky is stated to be ten years old—a statement which seems to be borne out by the soft and mellow character of the spirit to the taste. The low amount of extractives and the practical absence of acidity are noteworthy points.

"ANTI-MICROBE" SPIRITS.

(LEROY'S ANTI-MICROBE AND WINE AND SPIRIT CO., LIMITED, MANCHESTER; AGENT IN LONDON—A. E. WACHTER, 38, CHEAPSIDE.)

The basis of these preparations, including brandy and whisky, is an elixir which is described as being prepared (we quote it strictly) "from a recipe found among the manuscripts of an old Egyptian *savant*, and with the help of the highest medical and scientific authorities ingredients have been added which make the elixir an infallible remedy and antidote in all miasmatic diseases." The elixir tastes and smells strongly of an oily aromatic product suspiciously like pumilio pine; it contained 1·63 per cent. solid matter and 0·10 per cent. mineral matter. On evaporation of the brandy the liquid as the alcohol was expelled turned milky from separation of oil. The fixed residue amounted to 2·02 per cent. and the mineral matter to *nil*. The brandy gave a strong black colour with perchloride of iron, indicating tannic acid extractives. Its alcoholic strength was 41·29 per cent. by weight, 49·81 per cent. by volume, equal to 87·29 per cent. proof spirit. There are two kinds made, one for hot climates and the other for ordinary use, the latter probably containing less elixir. From the malarial point of view we believe the preparations to be worthless, and it is a pity that the manuscripts referred to in the statement above survived the "Egyptian *savant*," and, still worse, that medical and scientific authorities were found—if that is a fact—to "help" in suggesting "ingredients" which "make the elixir an infallible remedy and antidote in all miasmatic diseases." We should have been inclined to have looked upon the so-called remedy with slightly more favour if the vehicles chosen for its administration had not been whisky and brandy.

HOME-MADE BEEF TEA.

(FREDK. MASON, YORK WORKS, 52, ACRE-LANE, BRIXTON, S.W.)

A really valuable "invalid" preparation of this kind should be contained in glass jars rather than tins, since in the latter case there is always a risk of metallic contamination, especially when, as in this instance, the contents are liquid. We obtained a distinct, though probably not serious, indication of metal in this preparation in confirmation of this view. Otherwise its composition is excellent, analysis showing it to contain the nourishing as well as stimulating constituents of beef in good proportion. The "ten" was in good condition and perfectly sound to the taste. Though according to the microscope it contained no muscular fibre, an albuminous precipitate derived from the decomposition of alkaline albuminate was obtained on boiling with a few drops of acetic acid. Analysis gave the following results: total dry matter, 10·44 per cent.; consisting of matters precipitated by alcohol, 7·06 per cent.; albumin, 0·60 per cent.; crystalline principles (creatin, &c.), 2·10 per cent.; and mineral matter, 0·68 per cent.

(1) ACID GLYCERINE OF PEPSIN; (2) IMPROVED GREGORY'S POWDER; AND (3) AURAL OVOIDS.

(J. G. BULLOCK AND CO., 3, HANOVER-STREET, HANOVER-SQUARE, W.)

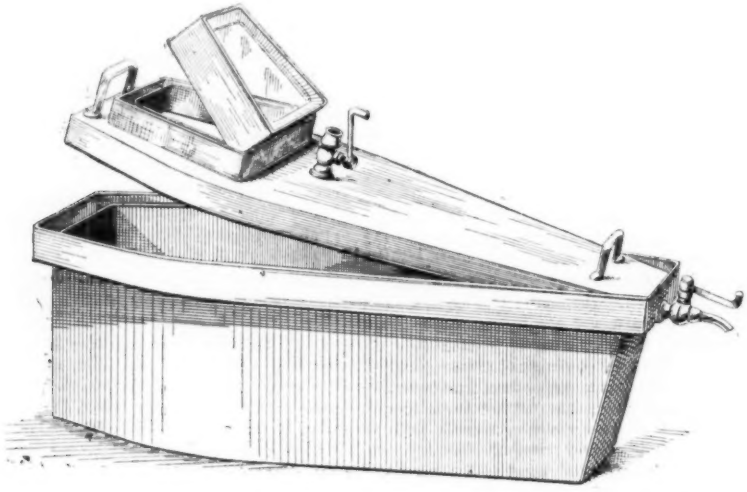
Glycerine, as is well known, is an excellent vehicle for administering pepsin since it is a good solvent, and is, moreover, preservative. The preparation before us possesses high digestive power, as proved in our experiments with it on albumin, and it is practically free from the objectionable taste which frequently characterises digestive mixtures with the same basis. The chief merit of the improved Gregory's powder consists in the purity of its ingredients and consequent freedom from inert matters. It may conveniently be taken in "rice" capsules. "Aural ovoids" are intended for the application of certain medicaments in the ear passage. We have examined the following: (1) extract. opii, ¼ gr.; (2) extract. opii, ¼ gr., cocaine hyd., $\frac{1}{16}$ gr.; and (3) iodoformin 1 oz., extract. opii, ¼ gr.; but ovoids containing other substances may be had to order. Their use and value are emphasised in the translation of Professor Grüber's "Diseases of the Ear" by Dr. Law and Dr. Jewell.

JEYES' SANITARY COMPOUNDS COMPANY, LIMITED, have received three further awards for their preparations—viz., Second Leicestershire Trades and Industrial Exhibition, held at Leicester, a gold medal; Yorkshire Brewers and Allied Trades Exhibition, held at Leeds, a gold medal and diploma; and Second Derbyshire Trades and Industrial Exhibition, held at Derby, a gold medal and diploma. The same firm have been again entrusted with the disinfection of Bisley Camp during the meeting of the National Rifle Association.

New Inventions.

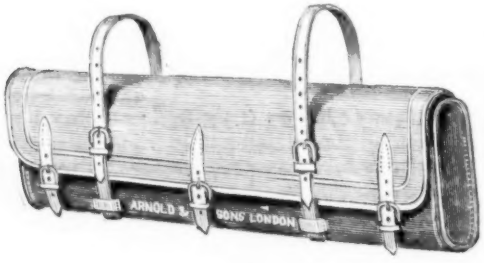
BIRCH'S MORTUARY SHELL.

THE mortuary shell illustrated below is one which may be worthy of the attention of public bodies, hospitals, vestries, shipping authorities, &c. From the illustration, which explains the invention as well as any written words could do, it will be seen that the corpse can be viewed through the glass face-piece without any fear of infection, and by filling a gutter running round the line of junction between the lid and the main receptacle with water the shell can be hermetically sealed. Lastly, a small tap in the centre of the lid, which communicates with the interior of the shell, can have attached to it indiarubber tubing leading out of the window or up the chimney, thereby preventing accumulation of gas. The weight of the shell is about three-quarters of a hundredweight, and the cost (according to size) is as follows: 5 ft. 6 in. long, £6 5s. net; 6 ft. long, £6 10s. net; 6 ft. 6 in. long, £7 net. The shell is manufactured at Myerson's Iron Works, 211 and 213, St. John-street, Clerkenwell, and a specimen may be seen at the St. Marylebone mortuary.



A MIDWIFERY SATCHEL FOR THE SADDLE.

PERHAPS a description of a leather case for midwifery instruments and bottles, which Messrs. Arnold and Sons, London, have made for me, will be of use to some country practitioners who do most of their work on horseback. The case is made of the best cow-hide and is fifteen inches long by eleven inches in circumference; it is oval at the ends and is closed by three straps and attached to the front of the off-side of the saddle by two encircling bands of leather. Its contents are as follows. One three-ounce bottle for chloroform; two one-ounce bottles for ergot and chloral; hypodermic syringe in case, with tabloids of ergotin and morphia; a pair of frænum scissors; packet of curved needles with stout silk sutures; a vaginal syringe; silk catheter, No. 8; and a pair of Simpson's long forceps. All the instruments and bottles fit in perfectly and can be taken out for use as quickly as from the ordinary obstetric bag. The satchel is not in the way when riding.



GEORGE D. MACKINTOSH, L.R.C.P. Irel.

A NEW OPTOMETER.

WE have received an optometer from Mr. Davidson, of 120, Great Portland-street, London, W., adapted to facilitate the selection of appropriate glasses in cases of myopia, hypermetropia, and astigmatism. It consists of a stand supporting a transverse bar, along which travel two wooden discs about ten inches in diameter. In the rims of these discs are inserted fifteen lenses, viz., −1 D, −2 D, &c., up to −8 D, and + 1 D, + 2 D, &c., up to + 7 D., and more might, perhaps, with advantage have been added. A blackened disc with a stenopæic slit can be placed before each lens. An arm, easily removable, at right angles to the transverse bar, and on the same plane, supports a frame in which a card slips having variously sized type and an astigmatic clock. This arm is perforated and can be attached to a gas pipe so that good illumination is secured. A small rack is attached to the stem containing a few extra glasses such as a 0·25 D, a prism, and several other glasses. The instrument is handy enough, and can be applied in addition to its use as a test for refraction as a means of determining the defect, if any, of convergent power, and by means of appropriate dials and cards of colour-blindness. It will prove useful to the country practitioner, and the cost, four and a half guineas, is moderate.

THE LANCET.

LONDON: SATURDAY, JUNE 20, 1896.

THERE never was a time in the history of the Royal College of Surgeons of England since 1843 when it was more desirable that the reforming element in the Council should be strengthened. At successive elections in late years Fellows anxious to advance with the times and to satisfy the legitimate aspirations of the Fellows and Members have been elected to the Council by very substantial and sometimes triumphant votes. The result of this has been that opinion on the Council is now very evenly balanced and the addition of one or two reforming Fellows would completely turn the scale. We have lately commented on the peculiar vicissitudes in the prospects of the Members of the College obtaining representation on the Council due to the chance presence or absence of reforming Fellows. At one moment everything seemed favourable for the immediate settlement of the question, and the next, owing to determined opposition at an opportune moment, reform kicked the beam. These vicissitudes do not enhance the dignity of the Council or conduce to the welfare of the College, and as they retard the development of the College as one of the greatest professional institutions in the United Kingdom we should be glad—loyal as THE LANCET has ever been to the cause of reform—to see a decided accession of strength to the more liberal section of the Council. The present time, moreover, is peculiarly favourable for the settlement of all constitutional questions which have arisen both as regards the privileges of the Fellows and the representation of the Members of the College upon the Council. The latter question dominates the situation entirely. If the Fellows of the College when polled should be so ill-advised as to vote largely against the Members' claims, a contingency, however, which we are far from expecting, all changes favourable to the Fellows will have to wait; but should there be a large or substantial majority the other way the Fellows will be able to secure what privileges they please. This is a consequence which the Fellows should not lose sight of at the coming election. The difficulty, however, arises that there will only be one absolute vacancy—namely, that created by the retirement of a gentleman who had decidedly liberal tendencies, and voted for the polling of the Fellows which is now about to take place, whilst those who are standing for re-election are opposed, no doubt conscientiously, to the Members' request for representation, as shown by their recent votes, and yet they have certain claims upon the constituency for re-election which we do not wish to ignore. It certainly seems strange to us, nearing as we are the close of the nineteenth century, during which so much has been done to remove disabilities and popularise institutions, that there should be found in the Council of the College nearly a dozen Fellows who feel keenly that the admission of representatives of the Members of the College, and especially Members themselves, to the Council Board would be a very dangerous and lowering measure. And yet so it is, and we deplore it, and deplore it more especially because among these Fellows are some of the most useful and active Members of the Council—men who occupy leading positions as surgeons, lecturers, teachers, and authors. This is the situation, and we feel it our duty to state it without desiring to influence the votes of the electors one way or the other. No doubt obstacles of this kind will gradually disappear, and disappear very quickly if the Fellows will unmistakably indicate by their votes, in answer to the Council's circular, that they wish the Members to share in the privilege of electing the Council. This would supply a remedy at once, and we appeal to the Fellows at large to end in this special manner a condition of things which really paralyses the energies of the Council, inasmuch as it perpetuates interminable discussions both inside and outside the Council concerning a concession to the Members which will abstract nothing from the power and influence of the Fellows in the Council of the College. With regard to the candidates themselves, the electors cannot complain that their choice of fit and proper persons to represent them is limited or that there is any want of variety in the qualifications of these candidates. On the contrary, in recent years there has been *un embarras des richesses*, and owing to the severe competition and the conflicting claims upon the votes of the electors several candidates who would have made most excellent councillors have not only failed, perhaps on more than one occasion, to command success, but have retired disheartened from the field. This year there are eight candidates for three vacancies created by the retirement in rotation of Mr. CADGE, Mr. BRYANT, and Mr. PICK. Mr. CADGE, having enjoyed two full and consecutive terms of office amounting to sixteen years, has retired from the Council altogether, while Mr. BRYANT (Fellow, 1853), who has served for the same period, and has been re-elected for five years as the representative of the College in the General Medical Council, and Mr. PICK (Fellow, 1866), who is now one of the vice-presidents and has served for eight years only, are standing for re-election. The six other candidates in the order of seniority are Mr. GEORGE POLLOCK (Fellow, 1846), Mr. J. N. C. DAVIES-COLLEY (Fellow, 1870), Sir W. B. DALBY (Fellow, 1870), Mr. R. CLEMENT LUCAS (Fellow, 1871), Mr. EDMUND OWEN (Fellow, 1872), and Mr. W. J. WALSHAM (Fellow, 1875). Of the eight candidates three are connected with St. George's Hospital, three with Guy's Hospital, one with St. Mary's Hospital, and one with St. Bartholomew's Hospital.

It is never a very congenial task to us to make a choice of particular candidates for recommendation to the suffrages of the electors, and the task is not always an easy one because of the reticence of candidates themselves in regard to their views on current questions. Of the eight candidates for the Council we know the views of four or five more or less completely, three being more or less reformers and the other two upholders of the *status quo ante*. The three former are Mr. GEORGE D. POLLOCK, Mr. DAVIES-COLLEY, and Mr. CLEMENT LUCAS. Mr. POLLOCK might of course have been elected to the Council long ago, and no doubt have held the office of President, had he cared to come forward for the Council

when he was well known to the Fellows generally, but, curiously enough, he could never be persuaded to do so by his numerous friends and admirers. A more high-minded and honourable gentleman and accomplished surgeon does not exist in the profession, and his candidature has been prompted by public spirit at a time when he is fully entitled to enjoy the *otium cum dignitate*. He is sincerely desirous to see the Council of the College acting in perfect harmony with the Fellows and with the Members of the College, and he is fully convinced that it is time that the Members of the College received due recognition of their claims to representation. The great advantage of his accession to the Council would be that the electors could absolutely rely on his conforming in the Council to the views and policy which he has for many years supported as President of the Association of Fellows, which must be greatly indebted to him for his faithfulness to the cause of reform even in periods of discouragement, and which ought to be loyal to him to a man. Of Mr. DAVIES-COLLEY we have spoken favourably on previous occasions, and we believe that he has liberal tendencies, but we are not so fully assured of his zeal as of that of his junior colleague, Mr. CLEMENT LUCAS, who has expressed his intention of advancing the cause of progress and supporting the Members' claims. Of the views of Sir WILLIAM DALBY, Mr. EDMUND OWEN, and Mr. W. J. WALSHAM we really know little or nothing. We know that Mr. OWEN is a popular surgeon, with considerable force of character, and if he be at all imbued with reforming principles we may be sure that he will express them forcibly and act on them energetically. We sincerely trust that Mr. WALSHAM'S reason for coming forward is not because he thinks that St. Bartholomew's Hospital is insufficiently represented in having only five members of its staff on a council numbering twenty-four Fellows. Possibly he may be urged by an irresistible *vis a tergo* and has not fully considered the subject, but we really think that the staff of St. Bartholomew's Hospital should adopt a self-denying ordinance and decide not to put forward another colleague as a candidate for the Council until one at least of the present group on the Council retires. St. Bartholomew's Hospital has supplied so many Fellows to the College that if their full strength is polled they can probably carry their representative into the Council, especially where the candidates are numerous; and St. Bartholomew's Hospital is so strong that it ought to be merciful and spare a seat for some unrepresented school.

This, then, is the position of affairs, and the task imposed upon us will be seen to be one of great difficulty and delicacy. With regard to the re-election of Mr. BRYANT we are opposed on principle to the re-election of a councillor for a third eight years' term of office, especially when he has enjoyed most of the honours and emoluments which the College has to offer, including the Presidency. Moreover, we are not in accord with Mr. BRYANT on the question of the representation of Members of the College on the Council, of which he is, perhaps, the most determined opponent. On the other hand, Mr. BRYANT is a representative surgeon and a regular and active member of Council and the representative of the College on the General Council of Medical Education and Registration, and although it is not necessary for this representative to be on the Council, the late Mr. MARSHALL having held the office after he left the Council, it is certainly more convenient. Mr. PICK has fair prospects of becoming President in due course, and has many excellent qualities as a surgeon and member of Council, but, again, we are not in accordance with his views on College politics. On these topics we could not desire better representatives than either Mr. POLLOCK or Mr. CLEMENT LUCAS, our only regret being that Mr. POLLOCK has deferred his candidature so long, for he is senior even to Mr. BRYANT as a Fellow of the College. We have no doubt that any one of the other candidates would prove a good Councillor, but we are not so certain about their views and we cannot recommend a sixth representative of St. Bartholomew's Hospital. In the foregoing remarks we have endeavoured to place the position of affairs impartially before the Fellows, sincerely trusting that they will arrive at a decision which will be just to individuals and at the same time conducive to the welfare, progress, and development of the College.

THE case of REGINA *v.* PRIESTLEY is one possessing more than transient interest for medical men. PRIESTLEY, a person without any legal qualification as a surgeon or dentist and calling himself a herbalist and dentist, undertook to treat a female domestic servant and to remove certain teeth which he pronounced to be decayed. On April 17th the girl went to PRIESTLEY'S house at Idle and was there examined by him. She asked him if he gave gas and he appeared to have implied that he did, and further, when pressed by the girl's mistress as to whether the gas would do her any harm, he said that it would not. After taking a heavy meal the girl repaired again to PRIESTLEY'S rooms. According to the evidence he then gave her half an ounce of chloroform while she was seated upright in a chair and without loosening her clothing. No third person was in the room at the time of the administration. After a few minutes the unfortunate girl died from the effects of the chloroform. PRIESTLEY was committed by the coroner at the finding of his court for manslaughter and was tried under this charge at the Leeds assizes. In summing up, Mr. Justice WRIGHT said: "The law allows an unqualified person to perform operations and practise his profession, and provided he is not negligent, but uses due care, he is not criminally liable," and as the jury were not able to agree that PRIESTLEY had shown negligence he was acquitted. That such is the law and the interpretation the forensic mind puts upon it cannot be gainsaid, but none the less is it a most deplorable state of affairs. While upon the one hand we have a number of special laws compelling medical practitioners to go through an expensive and arduous curriculum before "qualifying," yet upon the other hand we are told that the law so stands that any unqualified person may "practise his profession," even to the extent of giving a substance which leads to the patient's death, without let or hindrance. To give chloroform in the way in which PRIESTLEY is reported in the evidence to have administered it is to court disaster. It is discouraging to find that after nearly fifty years of its use so little general knowledge

of the properties of chloroform should exist and that the alphabet of its use should be unknown. If any medical man were to chloroform a patient sitting in a chair and with a stomach full of food he would be justly censured and would be certainly responsible for the results of his action. It then becomes a question as to who should give anæsthetics? Are these bodies such innocuous agents that the "man in the street" may use them with impunity? It was but a short time ago that a provincial surgeon informed our readers that he entrusted his patients' lives to a trained nurse, she administering the anæsthetic while he operated. In other hospitals we are told that the matron or a ward nurse acts as anæsthetist; the dispenser is also called upon to perform a similar office. It is a frequent occurrence in obstetric practice to intrust the chloroform to a nurse or even to one of those females who as *amicæ curiæ* hover about the parturient couch. It is, we learn, a common custom of dentists, whose qualification to practise is registration before July, 1878, or the possession of the L.D.S., to administer chloroform to their patients. There are several aspects of this most hazardous proceeding. When a medical man relegates to an unqualified person the duties which belong to him—and all, we presume, will admit that it is at least desirable that the chloroformist should possess such knowledge as would give the patient the minimum of risk whilst inhaling the anæsthetic—he becomes guilty of the offence of "covering." In the event of a patient dying from the effects of chloroform under these circumstances it is more than probable that an action for damages would be brought against the medical man who abetted the person giving the chloroform. But there is a higher platform and one from which the profession is always apt to view ethico-legal questions—that is the moral duty which we all owe to our patients to protect them from all possible risks and dangers. A glance through the records of fatalities enumerated in our recently published volume[1] reveals that even in the hands of expert and highly accomplished surgeons deaths under anæsthetics are constantly occurring. If such is the case what action can be more culpable than to increase the known peril of any operation, whether in obstetric or general surgery, by committing the chloroform into the hands of a nurse or other ignorant person? In the case of REGINA *v.* PRIESTLEY the defendant was given, by the judge's direction, the benefit of the doubt, but it is more than likely that others will be less fortunate and will learn when too late that a little knowledge is a dangerous thing alike to practitioner and to patient.

THE Army Medical Service has been drifting for some years past into a more and more unsatisfactory state, until it has reached a condition in which it fails to attract a sufficient number of candidates to fill its appointments. Lord ROBERTS the other day, in replying for the Army at the festival dinner in aid of the re-endowment fund of Guy's Hospital at the Imperial Institute, dwelt upon the great importance of securing the best men that could be got as officers for the Army Medical Staff, and he assigned several weighty, if obvious and commonly recognised, reasons in favour of that view. Almost every family in the United Kingdom, no matter in what station of life, is interested in the subject. In civil practice the advice and assistance of the highest authorities and of experts in any branch of the profession can be obtained in cases of unusual difficulty or gravity; but this obviously cannot be the case in army life. The military surgeon must very often rely entirely upon his own skill and judgment without any extraneous aid from men of acknowledged eminence and without, at any rate, the moral support of their opinion and experience. The army surgeon serving abroad is frequently in sole charge of an isolated district and of a large number of individuals quite beyond the reach of further aid, while to confine his labours within the strict field of his professional duties, pure and simple, would, in the opinion of the Government and military authorities, be attended with a waste of energy and an expense that would be prohibitory and impracticable.

It devolves upon a medical officer, then, to discharge other than strictly professional duties, notwithstanding that these are, and must always form, his primary and paramount duty—that for which he has been specially educated and is paid. Those, however, who know anything of army life are aware that these duties, except under special circumstances and conditions that are rather occasional than usual and ordinary, do not engross his sole attention, and that he has numerous other responsibilities and a large amount of work to discharge in connexion with extra-professional labours which the State has committed to his charge. As far as we can understand, the medical officers contend for one of two things—either for a purely professional department organised and paid as civil surgeons and physicians would be; or for a military organisation in which the medical department would be a military service discharging duties of a mixed and not a purely professional character. As they already hold the latter, then a position in the army worthy in every respect of its responsibilities and claims should be theirs. It must be "up to date" also, in the phraseology of the day, by which we mean that the position which the profession occupies scientifically and socially at the present time must be recognised, and this is not what it was fifty years ago. Medical officers contend that it was by no action of theirs that the relative rank which contented them in the past was abrogated, that it is not their doing that military rank and titles have been scattered broadcast among branches of the service that not so very long ago did not possess them, and that the possession of these alone should be held in respect or find favour in military eyes. We are strongly of opinion that the whole question, together with all other grievances—real and alleged, should be once for all carefully and impartially considered, and that the medical service should be justly and generously dealt with in a way calculated to satisfy all reasonable men in and out of the medical service.

If anyone will turn to the pages of THE LANCET during the past quarter of a century it will be found that we initiated, we may say, and have always advocated, the idea of the formation of an Army Medical Service under some such designation as a Royal Corps of Surgeons or Royal Medical Staff Corps, and that its officers should have power and

[1] THE LANCET and the Hyderabad Commissions on Chloroform.

command, but only, of course, within the limits of their functions. We are extremely sorry that this line was not followed years ago, as it would, we believe, have prevented all that has subsequently taken place. It is quite clear that the rank and position of every medical officer must be an assured and fully recognised one in the service, even apart altogether from the question of titles. There are, moreover, several very real grievances of which medical officers complain. Their life is one of comparative expatriation owing to the shortness of their service at home; and the frequent changes of station and duty to which they are subjected surely cannot be for the good of the service generally or of the patients committed to their charge. The rates of pay in India require to be readjusted; a medical officer should be paid wherever he is serving according to his rank. It would be a very good plan, in our opinion, to institute for the medical service something like that which the Staff College is for the general service, so that an incentive and impetus might be given to the more scientific and highly trained medical officers to make manifest their qualifications and attainments, and for this purpose, too, there should be greater opportunities afforded to them than exist at present for the *bonâ-fide* study of their profession. A service, again, organised on the dead level system of strict seniority does not, we confess, commend itself to us. Seniority is an important factor in weighing the claims of a medical officer for selection for the higher appointments, but seniority should not be the sole and dominating factor in such cases. There may be, and no doubt are, other points that could have been advantageously touched upon, but we trust that something has been done here to formulate the requirements of the service, and we can only hope that the War Office will give the whole subject full, fair, and impartial consideration.

Annotations.

"Ne quid nimis."

THE CAUSES OF DEATH IN COLLIERY EXPLOSIONS.

AN exceedingly important and interesting contribution to this subject has recently been published by Dr. Haldane in a Blue-book prepared for the Secretary of State for the Home Department. The report is based in the main upon the terrible explosions that happened in the Tylorstown, Brancepeth, and Micklefield explosions. We could wish we were able to publish this report *in extenso*, but its length precludes this course in spite of the excessive importance of the subject. Without entering into the specific details of each explosion, we may be content with simply recording the general results. Dr. Haldane divides the bodies of the unfortunate victims into two classes: first, those of men who had been killed by after-damp; and, secondly, those killed instantaneously by violence. It is the former class—which comprises 91 per cent. of the whole in the explosions referred to—with which we are more concerned in connexion with the consideration of affording some means of preventing this loss of life. There is little doubt that the cause of death by inhaling after-damp is due to carbon monoxide. This is clear from the investigation in some cases of the blood of the victims and from the characteristic, almost life-like, appearance of the corpses. The blood taken from both men and horses was shown by means of the well-known spectroscopic appearance afforded by carboxy-hæmoglobin to be highly charged with carbon monoxide. These facts make it evident that in most fire-damp explosions there must be in parts of the field of explosion not sufficient oxygen for complete combustion, and instead of carbon dioxide and aqueous vapour a variable mixture of carbon dioxide, carbon monoxide, watery vapour, and probably hydrogen will be formed, and these, when mixed with about 80 per cent. of nitrogen and any undecomposed fire-damp will constitute the after-damp. There are reasons for believing, however, that this proportion is by no means high, and it is probable on theoretical grounds that in an explosion with an excess of fire-damp and without dust not more than about 3 or 4 per cent. of carbon monoxide will be formed in any part of the track of the explosion. The evidence is clear, however, that whatever poisonous gases exist the gas present in the most poisonous proportions is carbon monoxide, and this gas undoubtedly occurs in the after-damp of all great colliery explosions. *A priori*, in these explosions there must have been an insufficiency of oxygen for complete combustion. Everything indicates in fact that the exceeding danger of after-damp is referable to the constant presence of carbon monoxide. Apart from the results of the experiments made with the blood, the pinkness of the lips and the general life-like appearance of the bodies recovered after explosions point to the same poison. From experiments tried upon himself, Dr. Haldane calculated that about six hours are required for the carbon monoxide to disappear entirely from the blood in severe cases of poisoning. Although this is so, the distressing after-effects continue, which may end fatally. In regard to treatment, Dr. Haldane considers the administration of oxygen would be of service in rapidly clearing the blood of carbon monoxide, but the first effect of cool fresh air would appear to be dangerous. This is suggested as being due to the cold diminishing the blood-supply to the brain or to the temperature of the body being reduced owing to impairment of the heat-producing or heat-regulating functions. At any rate the application of hot water bottles and blankets appear to be of great service. In regard to preventive measures, in addition to increased facilities for ventilating the mines in times of emergency, Dr. Haldane suggests that the work of rescue would be much more safe if a few simple precautions were observed. Thus the presence of a dangerous proportion of carbon monoxide may be detected easily and sufficiently quickly by observing the symptoms exhibited by a mouse. A few white mice might easily be kept for this purpose in the engine-room at the top of the down cast-shaft and be taken down in small cages by the rescuers. With the help of the indications afforded by the mice it would be possible for the rescuers to keep within the limits of safety and yet go forward with rapidity and confidence as far as they could. He also lays down some sensible directions as to the position the men should take after the occurrence of the explosion, and some reasonable measures which should be observed by the rescuing party. He suggests also that cylinders of compressed oxygen should be at all times available in the mine. As will be seen from this brief digest, the report is an admirable piece of work dealing exhaustively with the scientific aspects of colliery explosions, their probable nature, and the effects they produce. The community at large will welcome such an earnest and solid endeavour to minimise the sorrow occurring from one of the most distressing calamities that can happen in this country.

LORD KELVIN.

THE congratulations which fell so thickly and so unstintedly upon Lord Kelvin on the occasion of the commemoration of the jubilee of his professorship of natural

philosophy in Glasgow University represent something more, we are sure, than mere felicitation on so long a tenure of so distinguished an office. It was a fitting opportunity of recognising his brilliant achievements in scientific work and the splendid results of the application of his discoveries towards advancing so much of the progress in the public weal which has been so marked a characteristic of the closing century. As is well known, Lord Kelvin's keen perceptive faculty has been chiefly directed to the study of the laws governing that still mystical force—electricity. Yet with characteristic modesty he admitted the other day that he knew no more of electric and magnetic force, or of the relation between ether, electricity, and ponderable matter, or of chemical affinity, than he knew and tried to teach his students of natural philosophy fifty years ago in his first session as professor. He forgot to add, perhaps, in the exceeding good taste which he has always evinced, the enormous impetus, as the outcome of his work, which he has given to what we may call telegraphic science or the science of the transmission of words from distant lands and across the sea in a space of time so lightning-like as to excite our deepest wonder and admiration. His scientific triumphs in this direction were appropriately enough demonstrated in a very happy way on the occasion of the meeting at Glasgow to which we have referred. Thus a congratulatory message was sent from the jubilee committee by way of Newfoundland, Chicago, San Francisco, Los Angelos, New Orleans, Jacksonville, Florida, Washington, New York, Newfoundland, and thence to Glasgow University, a distance of some 20,000 miles, in about seven minutes. There was used for the first time a cable recorder on a cable and land wire of immense length. The marvellously quick time of transmission demonstrated the successful working of Lord Kelvin's syphon recorder. Despite his confession also as to his insight in regard to the vagaries of magnetic force he has so far mastered them as to have ultimately placed a marvellously accurate and delicate instrument at the service of the navigator, and we venture to say that there is hardly a ship afloat which does not carry a Sir William Thomson's compass, the boon conferred by the introduction of which will be admitted by all those who "go down to the sea in ships." Then there are the manifold instruments of exact measurement used in physical science which are less prominent as directly of public service, but none the less are they of equal importance, and a reference to text-books on physics will reveal how intimately associated with Lord Kelvin's name is almost every section of electrical and magnetic science. The medical profession upon whose labours Lord Kelvin's discoveries are not without an important bearing will join, we feel sure, in adding congratulations to those already awarded him and to which he is so richly entitled.

"A BENEFICENT MEDICAL DISCOVERY."

UNDER this somewhat high-faluting title a contemporary makes a good deal of copy anent the use of oxygen with chloroform. An interviewer waited upon Mr. T. G. H. Nicholson, M.R.C.S. Eng., anæsthetist to the Hahnemann Hospital, Liverpool, and naturally found that gentleman "shy." Unfortunately he appears to have overcome his shyness and to have dropped that laudable reticence which, we are told, cloaked his speech when first approached. Had he at once stated to the representative of the *Liverpool Courier* that he possessed no right to be regarded as a discoverer he might have avoided both undesirable notoriety and newspaper puffing which should be a source of extreme annoyance to any member of the medical profession. We are told that this gentleman patented an apparatus for administering oxygen gas with chloroform in 1893, but the idea had been "simmering" in his head since 1891. We do not suppose for one moment that any wilful misrepresentation of facts has been intended, but it is of interest to trace the "simmering" of the same idea in other minds throughout the past twenty years or so. The "discovery" is the well-known method of Neudörfer, which he introduced into practice in Vienna about twenty years ago. Even as early as 1860 Lallemand, Perrin, and Duroy investigated the supposed antidotal value of oxygen in chloroform toxæmia, and came to the conclusion that its merits in that respect were slight. Snow in 1849 was also familiar with it and recorded a case in which forced respiration of oxygen was practised in what proved to be fatal syncope. Neudörfer, however, suggested that by actually combining oxygen gas with chloroform vapour it might be possible to lessen the risk of asphyxia. Whether this was done by maintaining the vitality of the tissues or by simply producing a due dilution of the chloroform does not appear certain. At all events, Idelson, Bertels, Kreutzmann, and others have followed Neudörfer's method and have regarded it with favour. Mr. George Foy described a simple apparatus for giving oxygen, and this can be combined with a chloroform apparatus, affording a ready means of combining the use of oxygen and chloroform. Kreutzmann[1] also devised an apparatus of less complexity than that which Neudörfer employed. The mixture has further been successfully tried in America, but experience has taught that while oxygen is of value in asphyxial conditions it really possesses no merit as a physiological antagonist to chloroform. The plan referred to is neither new nor yet so old as to be safely re-introduced as a novelty, save in the pages of a lay journal whose zeal for "copy" outruns its discretion. Many letters of somewhat fulsome adulation of this "discovery" have appeared, but as yet we have not seen any disclaimer from Mr. Nicholson of this bantling or any attempt to render to Neudörfer whatever credit may be due for his discovery.

TOXICOLOGICAL EFFECTS OF CREOLIN.

CREOLIN compounds are now so extensively used as disinfectant washes, more especially as they are believed to be non-poisonous, that the results of an investigation by Professor Hobday of the Royal Veterinary College calculated to disturb this notion will be read with interest and instruction; at any rate, they should place the public on their guard in respect to the application of these compounds to the body. The investigation was set on foot by observing the fatal effect of applying solutions of creolin to a couple of valuable ferrets affected with lice and mange. The amount of creolin used was estimated at about two ounces to a quart of water, in spite of which dilution both animals were dead within half an hour of the application. Again, in the case of a valuable bull terrier severely affected with follicular mange "the result was most alarming and all attempts to save the animal failed," the application having consisted in rubbing the affected parts with a solution containing four ounces of creolin and four ounces of water. To set at rest the question whether this alarming result was due to any peculiar idiosyncrasy of the animal a fox terrier was treated in the same way, but the result was equally unfortunate. Several animals (dogs and cats) were then submitted to experiment with more or less toxic effects, and in the majority of instances those effects were followed by death. This important report concludes with the following observations: that creolin is a narcotic and irritant poison to the dog and cat, and that its use in these animals must be watched with the greatest care; that it is especially toxic when spread in emulsions of a certain strength over a large area of the body; that

[1] Centralblatt für Chirurgie, No. 35, 1887.

its effect is more rapidly seen and more violent when mixed with water than when applied pure or when mixed up into the form of an ointment; that when mixed in certain proportions and applied externally it will act as a violent irritant; that the less refined preparation of creolin is not so toxic in action as pure creolin; and that it is not so readily absorbed from the stomach, from small wounds, or from the subcutaneous tissues as from a large area of skin surface. The results are certainly very striking and would appear to show that creolin cannot be regarded as an absolutely safe external application. Its claimed advantage, therefore, over carbolic acid of being non-poisonous cannot fully obtain. Professor Hobday does not enter into the exact composition of the preparations he used. It may be fairly assumed, however, that they consisted of a strongly alkaline and resinous solution of cresylic acid. Did the alkali play any part in the symptoms observed, and was carbolic acid present in appreciable quantity? The observations, at any rate, are valuable and are based upon trials made with preparations to be found on the market which are generally stated to be innocuous. It is reasonable from the foregoing to enjoin care in the use of these preparations for external application to the human being and other animals.

THE POSITION AND REMUNERATION OF MEDICAL MEN.

OUR correspondent "M.D." discusses many subjects any one of which would require a leading article for its proper treatment; the amendments of the Medical Act; the exposure of qualified men to the competition of charlatans; the overcrowding of the profession, caused partly by the competition of the schools and of the examining boards; the absence of instruction in the business aspects of the profession; the alleged want of consideration of medical teachers for the ultimate fate of students; and the want of provision in our medical societies for discussion of matters of professional reform and political combination, are all touched on in his suggestive communication. We shall not attempt to treat these subjects in one short article. The state of the profession might well occupy our leading corporations and societies a little more than it does. There is certainly one reform that might be further pressed without hardship to any and with infinite advantage to the public—we mean the exaction from *entrants* to the profession of proof of a more complete preliminary education than is now required. This would check the rush into the profession at a merciful point, and before men who were never meant for such a pursuit had committed themselves to it. As to the necessity for amendment of the Medical Acts there is a general agreement. When proposals for the same take definite form medical men of each town and locality should hold meetings for their consideration. It is difficult to interest Parliament in Medical Acts. It is certainly not wise to be often disturbing the Acts or the bodies which administer them; but when the rare occasion arises for doing so the well-considered views of medical men would not be likely to be disregarded.

CANON WILBERFORCE UPON HOSPITALS.

WE have before now had occasion to take Canon Wilberforce severely to task for various statements which he made about hospitals, and therefore we have all the more pleasure in noting the moving and yet eminently sensible and sound discourse which he gave at Westminster Abbey upon Hospital Sunday. We do not suppose for an instant that Canon Wilberforce has changed his views upon the question of vivisection. We believe him to be perfectly sincere in those views, although mistaken, but we congratulate him upon being able to look at the question of hospital relief apart from the minor, or, if he prefers it, collateral question of experiments upon animals. That everyone cannot do this is apparent from the circular to which the preacher alluded, evidently the same document to which we referred in our columns of May 30th. Canon Wilberforce's remarks upon this subject were admirable, and it is a great pleasure for us to be able to say so.

THE PHILADELPHIA POLYCLINIC.

THE Philadelphia Polyclinic holds a special position among the hospitals of the Pennsylvanian city, being devoted entirely to post-graduate teaching. It is situated almost equidistant from the University of Pennsylvania, the Jefferson Medical College, and the Medico-Chirurgical College, and was opened early in 1883, its dispensary services treat about 15,000 new patients annually, and its course of study is based essentially on direct personal instruction by the teaching staff, which at present includes upwards of thirty-five professors and lecturers. There is an ample supply of clinical material. The new laboratory building is one of the finest in the country and is completely equipped with all modern appliances. Arrangements are being made to provide an exceptionally powerful "x" rays apparatus superior to the efficient instrument which is at present available for purposes of diagnosis, and Edison's fluoroscope will be used for direct visual observation of internal parts. The fees for the entire work and instruction in all the clinical departments are $90 for six weeks, and $150 for three months; pathology, bacteriology, operative surgery on the dead body, the putting up of fractures, dressings, and bandaging, &c., are extra subjects. The institution publishes a small journal which is likewise called the *Philadelphia Polyclinic*.

THE ABUSE OF TOBACCO.

SOCIETIES for the suppression of human frailty, though very numerous, are not as a rule remarkable for moderation; but, judging by their utterances, this reproach cannot with justice be levelled against the chief officials of a certain Parisian society whose object it is to prevent the abuse of tobacco. At a meeting held last April for the purpose of distributing prizes and rewards Dr. Gruby, the president of this association, commenced his inaugural address in the following reassuring terms. "The society against the abuse of tobacco proscribes the inordinate employment of that substance, but by no means condemns a moderate and judicious use. The very best things in the world are capable of producing injurious effects when taken to excess." Continuing his discourse, Dr. Gruby, as in duty bound, next proceeded to enumerate the various maladies and disorders which are supposed to attend upon indulgence in tobacco, but the list did not contain anything that was either striking or new. The general secretary, Dr. Gélineau, then read his report on the working of the society, winding up with the information that the executive intended to submit a petition to the Chamber of Deputies praying that "all telegraph messengers and schoolboys should be prevented from smoking, and also that tobacconists should be forbidden to sell their wares to mere infants whose lips should know no other pleasure than the cheeks of their mothers." Finally—after a disquisition from Dr. Edgard Bérillon on the treatment of *tabacomia* by hypnotic suggestion, and a lecture by M. Decroix on the dangerous progress of opium-eating in France—a lengthy roll of prize-winners was announced. First in order were several teachers, of whom one had founded a league against the abuse of tobacco amongst his pupils, while another had invented a copybook with headlines proclaiming the noxious effects of the direful weed. After the pedagogues came a sparse troop of omnibus conductors, whose claim to recompense lay in having interdicted smoking on the platforms of their vehicles; but the *lauréats* next on the list, although somewhat invidiously styled

"provincial" journalists by the metropolitan reporter, must surely be as rare in their profession as black swans were supposed to be when Juvenal penned his satires. Last of all—on the principle, we presume, that *finis coronat opus*—came the author of a formidable counterblast in the shape of a series of anti-nicotian sonnets; but there is apparently a limit to enthusiasm, even among zealots, and the verses were taken as read. The programme was now exhausted, but before the audience dispersed the secretary felt constrained to remonstrate with them on their excessive zeal. Most of the members, he said, were more royalist than the king. It was a fatal mistake to try to do too much. Tobacco has enough sins of its own to answer for without being made a scapegoat for half the ills that flesh is heir to. Moderation must be the watchword of the society if the evils which unquestionably do accompany the misuse of tobacco, especially in the case of immature boys, are to be remedied. It is to be hoped that these words of wisdom have been taken to heart by the hearers, and that no captious critic will accuse the society's officers of endeavouring at one and the same time to run with the fox and hunt with the hounds. It must be confessed that between the words and the deeds of these gentlemen there is a certain amount of incongruity; but then this world is full of contradictions.

THE PLAIN TRUTH AT INQUESTS.

TACT in the use of words is a faculty to be exercised by all sensible persons as long as this is consistent with a true and clear understanding. To medical men its employment is a daily necessity. Perhaps no class of men are more often called upon thus to clothe hard facts with a truly fitting dress of language. It is therefore the more important that they should not mistake the spurious for the real quality. Men are apt to fall into this error with the best intentions. We may be allowed to quote from recent experience of a coroner's court. On the occasion in question a medical witness, who had verified by post-mortem examination certain lesions due to alcoholism, very briefly described the death as due to "natural causes," his desire being if possible to avert the scandal of drunkenness. His was but a trifling error of judgment and it derives what little importance it possesses from its rather ungracious treatment by the presiding coroner. Had his evidence been stated with equal moderation but more precision it would still have been unexceptionable on the ground of good feeling and it would better have served its intended purpose, which was the enlightenment of the coroner and his jury. It is sometimes compatible with good sense and true kindness to speak plainly. This was a case in point.

ANNUAL PAUPER RETURNS.

THE Local Government Board have issued their annual return of paupers, including lunatics and vagrants, relieved on the first day of the present year, with comparative data for previous years. From this return it appears that, including 169 persons relieved both as in-door and out-door patients, the gross total of persons obtaining relief on Jan. 1st last was 840,625. On the estimated population of the Registrar-General this gives a rate of 2·8 per cent. of the population, or 1 person relieved in each 36 of the entire country. Of this total, 229,721 were in-door and 610,904 out-door paupers. The vagrant class accounted for only 13,239, including 7859 who were relieved in two unions on this same day. Only 390 of the vagrants were out-door relief cases. The in-door paupers include all those in Poor-law establishments such as district schools and the like. The able-bodied adult paupers relieved included 36,999 males and 75,380 females, and 168,669 children under sixteen years of age, the offspring of able-bodied paupers, were also relieved. The insane numbered 37,076 males, 46,379 females, and 1750 children under sixteen years of age. The ratio of paupers relieved to population was in England and Wales 27·7 per 1000; in London it was 28·2, in the eastern counties 37·1, and in the south-western counties 40·4. In-door paupers were at the rate of 7·6 per 1000 in the whole country, in Wales only 4·1, in Yorkshire only 4·5, but in London 15·8. As compared with the first day of 1895 the only groups of counties showing a decline this year were Yorkshire and the northern counties group. London showed an increase of 1·3 per cent., the north-western group of 3·0, the south-eastern and south midland of 3·1 and 3·5 respectively, and the north midland of 4·7 per cent. Throughout the country the increase was 1·6 per cent. Compared with earlier years the proportion of paupers to population was larger than on the same day of the five immediately preceding years, but smaller than in any of the years 1858–90 inclusive. In 1877, when the number of paupers was the smallest on record, the total was 12·8 per cent. fewer than in the present year. The able-bodied paupers were this year larger in their total number than in fourteen out of the twenty preceding years, but smaller than in the other eighteen years 1858–75. The data are given in detail for each of the Poor-law unions of England and Wales.

MEDICAL LONGEVITY.

DR. SALZMANN of Esslingen—who apparently is largely endowed by nature with a predilection for investigating the contents of ancient records, and who, more fortunate than the majority of his compeers, likewise enjoys exceptional facilities for indulging in his hobby—has recently devoted his attention to determining the average duration of life among members of the medical profession. After an exhaustive examination of all accessible archives referring to the last four centuries the following are the results arrived at by the zealous antiquarian. The average duration of a medical man's life during the sixteenth century was thirty-six years, five months; in the seventeenth century it was forty-five years, eight months; in the eighteenth century forty-nine years, eight months; and in the nineteenth century fifty-six years, seven months. It would appear from these data that—whether the survival be of the fittest or not—the duration of medical life has been increasing in a marvellous manner. Should the same rate be maintained practitioners of medicine may ere long all look forward to centennial honours—by no means a rosy prospect from the point of view of the neophyte who, as it is, finds it sufficiently hard to make good his footing within the densely crowded ranks. According to Dr. Salzmann the addition of over twenty years to the average medical lifetime is due to the advance of medical science, preventive and curative; so the ironical apophthegm, "Physician, heal thyself," can no longer be launched with any effect. In a speech delivered some time ago the present leader of the House of Commons alluded to the possibility of normal human life becoming extended "to the patriarchal term of 120 years." A fearful prospect truly in these days of rapid living when some men (having exhausted life's possibilities) look upon themselves as Struldbrugs at forty.

LIVERPOOL LADIES' CHARITY AND LYING-IN HOSPITAL.

A SPECIAL general meeting of the subscribers to the Ladies' Charity and Lying-in Hospital, Brownlow-hill, has been called for Tuesday next (23rd inst.), to consider the position. Mr. James Lister, the hon. secretary, states in a letter accompanying the notice that owing to the action of the medical profession the board of management had been unable to obtain the services of a medical staff. It is now

suggested that the general control in medical matters of all the cases should be placed under the hospital medical officers. The board of management is understood now to think it desirable that the rules should be altered in such a way as to admit of representation upon it of the medical staff. We heartily agree with the new views of the board of management.

THE CASE OF MR. R. B. ANDERSON.

MR. TIMOTHY HOLMES has given notice that at the forthcoming meeting of the Fellows of the Royal College of Surgeons of England to be held on July 2nd, he will move: "That the Council be requested to instruct its representative on the General Medical Council to forward in every way which seems feasible the objects of the Civil Rights Defence Committee in the case of Mr. R. B. Anderson." We invite every Fellow to support this motion. Mr. Anderson's wrongs are well known and we need not go into them now, but somehow or other his wrongs must be redressed.

COMMERCE AND PHILANTHROPY.

MR. WILLIAM COOPER of Stafford is doubtless a sound man of business. Doubtless, too, like Abou Ben Adhem, he desires to be written as one who loves his fellow men, but he has committed what we will mildly stigmatise as an error in taste. He has a business to sell, apparently a hotel with brine baths attached, and "as the success of this company will be largely dependent upon the support given to it by the medical profession" he makes the following offer—bribe we consider the proper word—to the medical profession:—

> The vendor undertakes, immediately after completion of the purchase of the premises and the receipt by him of the first instalment of the purchase money (which is fixed for the first day of September next), to pay to each subscriber to this issue who is also a duly qualified medical man, an underwriting commission at the rate of 10 per cent. in respect of shares, and 5 per cent. on debentures subscribed for and allotted to him, provided the contract to take such shares or debentures accompanying this prospectus is duly returned before June 20th instant.

There can be no doubt as to Mr. William Cooper's line of argument. It is a bribe to medical men to send patients to the Stafford Brine Baths Hotel and so increase the business done there, and Mr. William Cooper evidently thinks that if medical men have a pecuniary interest in the concern they will be the more likely to send patients to it. Besides baths, however, the medical man who comes to this lure will have an interest in a variety of commercial pursuits, as follows:

> To carry on the business of hotel, restaurant, café, tavern, beerhouse, refreshment room and lodging-house keepers, licensed victuallers, wine, beer, and spirit merchants, brewers, maltsters, distillers, importers and manufacturers of aerated, mineral and artificial waters and other drinks, purveyors, caterers for public amusements generally, coach, cab, and carriage proprietors, livery stable keepers, jobmasters, dairymen, ice merchants, importers and brokers of food, live and dead stock, and foreign and colonial produce of all descriptions, hair-dressers, perfumers, chemists, proprietors of clubs, baths, dressing-rooms, laundries, reading, writing, and newspaper rooms, libraries, grounds and places of amusement, recreation, sport, entertainment, and instruction of all kinds, tobacco and cigar merchants, agents for railways and shipping companies and carriers, theatrical and opera box-office proprietors, entrepreneurs and general agents, and any other business which can be conveniently carried on in connection therewith.

All these businesses are perfectly legitimate and honourable, neither is there any reason why a man should not invest his money in any or all of them; but he should do so as a private individual and not as a member of a profession, which, equally with its sister faculties, ought to be above suspicion, even more than the London County Council.

GUARDIANS AS SANITARY AUTHORITIES.

THE return to sanity in guardians on the vaccination question is slow. In fact, it may be said that they have been tried as administrators of the Vaccination Acts and found wanting. The medical officer of health of Islington points out to the vestry that the proportion of unvaccinated children to those born has increased in that huge parish from 8·0 per cent. in 1885 to 18·0 per cent. in 1895. Mr. Harris was directed by the Public Health Committee in 1894 to represent to the guardians this grave state of matters, but nothing remedial has been done. In neighbouring parishes matters are as bad or worse. In Hackney, indeed, it is nothing short of a public scandal, the last available return showing that 41 per cent. of infants born remain unvaccinated. No wonder that the Vestry of St. Pancras has decided to convene a conference of delegates from vestries and district boards to consider the advisability of transferring the administration of the Vaccination Acts from boards of guardians to the sanitary authorities and that the sanitary committee of Islington has advised the vestry to appoint a deputation to attend the conference. On going to press we hear there is a localised group of cases of small-pox in Islington, which is likely to increase the earnestness of the vestry in this matter.

HEAT AFFECTIONS.

THE exceptional heat that has prevailed during the last few days has naturally been the subject of common remark. With each recurrence of hot weather we get, of course, its usual concomitants in the shape of discomfort, sleepless nights, more or less nervous depression, and affections attributable to heat fevers, heat exhaustion, and occasionally sunstroke, to say nothing of the distress to infants and children and their liability to attacks of indigestion and diarrhœa or nervous exhaustion. We do not think there is anything that can be said at the present time that has not been often said before. For those who live in the country surrounded by fresh air, who can dress in the lightest and coolest attire, and take their exercise when and how they like, hot weather is so enjoyable that a good many people revel in it. But it is a very different thing for those who are compelled to live in cities, to travel by underground railways, and to submit to the dust, closeness, and noise of London streets, and a succession of bands and organ-grinders, the practising of "scales" by inexperienced pianists, violinists, and vocalists, the yells of newsboys and race-card sellers, varied occasionally by the possible howling-whine of some pet dog that has been inadvertently left outside a house at night. Medical men cannot do much to relieve these sources of distress and discomfort; but a good deal may be done by the exercise of a little physiological intelligence and common sense to avert some of the other and graver effects of heat. Toleration of heat depends much on the vigour of the constitution, the state of the health, and the mode of living, especially in freedom from excess in alcohol and food, in being suitably appareled, and in getting all the air and ventilation that are available. We need not dwell upon the different forms of sunstroke and heat affections; they are pretty well known. Among the gravest of them is the exhaustion caused by heat which is followed by syncope, a condition allied to shock from the effect of a powerful sun on the nerve centres, especially the respiratory centre, and that form attended with the over-heating of the blood and all the tissues of the body. Men on parade or when marching, if oppressed with accoutrements and clothing, or when occupying heated and badly ventilated barracks in tropical or subtropical climates, are very apt to suffer. A dry heat, it is well known, is better tolerated than a moist one, and we have evidence of this in the experience of our soldiers in the present Soudan campaign. The treatment obviously cannot be the same in all cases, but where a high body temperature is a characteristic feature of the attack cold is the remedy—cold water, ice, and exposure to currents of air. The great heat of Saturday last resulted in three cases of sunstroke, one of which ended fatally, in the Royal Irish Rifles on their march from Lydd camp to Brighton. We can all of us, at any rate during exceptionally hot weather, try to keep quiet and abstain from "worritting" ourselves and other people, and

clothe and eat lightly. For children who feel the heat there is, of course, nothing like removal from towns and cities to seaside and country places.

ST. MARY'S HOSPITAL: CLARENCE MEMORIAL FUND.

THE festival dinner of St. Mary's Hospital was held in the Whitehall Rooms of the Hôtel Métropole on Wednesday last, Sir Wm. Broadbent presiding, and resulted in the addition of nearly £4700 to the Clarence Memorial Fund. This sum represents only one third of the amount which is required to complete the new buildings, and owing to the inadequacy and unsuitability of the present out-patient department it is most desirable that the work should be carried out immediately. In addition to a new out-patient department the Clarence wing will comprise a nurses' home, lying-in wards, various special wards, and a medical college. These are all urgently needed in a hospital whose original accommodation for some 70 or 80 in-patients has been stretched to a limit of 281. If the hospital is to adequately fulfil its function of ministering to the sick poor in a vastly crowded portion of the metropolis there must be no delay in building the first portion of the Clarence wing. We earnestly hope, therefore, great as have been the demands upon the benevolent lately, that they will allow a portion of their charity to flow towards a most deserving institution. With the exception of the £4700 consequent on the festival dinner the whole of the funds have been absorbed in the building of the basement.

A PROTEST AGAINST THE USE OF ALKALI IN COCOA.

FROM practical experience gained in THE LANCET Laboratory during the past year it is evident that the practice of treating cocoa with alkali is largely on the increase. It is done ostensibly, we believe, to render the cocoa more "soluble"; in reality the cocoa fat is in part by this treatment saponified, so that the infusion made with it presents the appearance, and conveys to the palate the impression, of a richer and more full-bodied beverage. In addition the powder is considerably deepened in colour, which is probably and wrongly judged by an ignorant public to indicate richness of quality. If it were necessary to treat cocoa in this way in order to make it palatable and digestible we should have nothing to say; but it is not so, and that being the case it constitutes a mild but distinct form of fraud. We go further and enter a protest against this treatment of cocoa with alkali because we are confident that in many cases it may be productive of harm. It must be remembered that invalids and those suffering with certain forms of weak digestion are in a great number of cases prohibited the use of tea and coffee, and cocoa is invariably recommended as a substitute. Moreover it is well known that the long-continued use of alkalies leads to digestive disorder and consequently impaired nutrition. Yet we have examined cocoas containing from 1 up to as much as 3 per cent. of alkali calculated as potash. Cocoa the indigestible fat of which has been properly reduced to 30 per cent. by pressure in hot bags contains at the most only ½ per cent. of alkali. We have examined such cocoas which leave nothing to be desired as regards quality and flavour, while further tests have also shown the absence of an excess of nitrogen in the form of ammonia. This is why we believe that the treatment referred to is wholly unnecessary. We call attention to this fact because we believe that many medical men are not aware of it, and in certain cases under their care it might well happen that the exhibition of alkaline fluids as such cocoas would yield is very distinctly contra-indicated. It is absurd for manufacturers to argue that it is done to please the public taste. The same thing was urged long ago in regard to white bread; but the public have since been undeceived, and an enormous demand has arisen of late years for an unbleached, a healthy-looking, and an unimpoverished loaf. We hope the public will assert their good sense in a similar way in regard to cocoa.

QUALIFIED *v.* UNQUALIFIED.

THE public will, we suppose, to the end of time continue to exemplify the Horatian maxim about wishing to be deceived, and a most instructive case is reported from Grimsby. Alfred Barnes claimed £50 damages from two bone-setters named Bromfield, carrying on business in Grimsby, for unskilful treatment. On Jan. 20th he knocked his shoulder. On Feb. 1st he consulted Mr. Alexandre, a duly qualified medical man, who found nothing wrong with the joint, but did find an enlarged axillary gland, and recommended rest and poultices. On Feb. 7th Mr. Barnes consulted the Bromfields. Bromfield, sen., according to Bromfield, jun., said "the fat muscles were wrong," and pulling his knee in the axilla wrenched the joint. He, Bromfield, jun., put his hand on the patient's shoulder and felt the muscles "go." Eventually a large abscess formed and Mr. Barnes returned to Mr. Alexandre, who treated him for this. Mr. Barnes contended, and so did Mr. Alexandre and two other medical men, that the Bromfields' treatment had caused this abscess. On the other hand two medical men said that this could not be the case. The anatomical knowledge of these latter gentlemen is defective, for they both, according to the *Grimsby Independent*, said that an axillary abscess could not be diffused. The jury returned a verdict for the Bromfields, their solicitor pointing out that there was no law against a man practising as a bone-setter without a medical qualification. This is quite true, but there should be. We are sorry for Mr. Barnes' original accident, but he does not deserve the least sympathy for the results which followed. Perhaps, some day the legislature will wake up and come to the conclusion that if it obliges medical men to spend five years and a large sum of money in educating themselves they ought to be protected against those who have no qualification; and, moreover, since the law will not allow a man to sell a pint of beer, an ounce of tobacco, or buttons or pins in the street, without paying for the privilege, the law might also insist on an unqualified practitioner paying a small sum, say £200, for the privilege of dabbling in the economy of a fellow creature.

THE LAW AS TO THE SUPPLY OF POISONS.

THE evidence given at the inquiry into the death of Professor Middleton reveals, or perhaps we should say draws attention to, the very dangerous state of matters in regard to the supply of poison by prescription. The following is the evidence of the druggist as reported in the daily press. Thomas Henry Keen, a druggist, of 9, Bruton-street, W., said he supplied the deceased with a solution of morphia made up from a medical man's prescription. He had had it for twenty-two years, and the strength was 1 in 20. He usually purchased twenty-four bottles at a time, half of which were packed up ready for abroad. Each bottle contained twenty-four grains of essence of morphia. He had not seen Professor Middleton for some time. The morphia did not require signing for, as it was a prescription, so that there was no breach of the Pharmacy Act. What "essence of morphia" is we do not quite know, but one fact is clear. Here was a man able to supply himself for twenty-two years with a powerful drug, not in small quantities but in large, and that too on the authority of a single prescription written, we suppose, twenty-two years ago. The druggist was perfectly within his rights as the law stands, but we contend that the law should be

altered. Prescriptions such as this ought to be endorsed by the physician in some such way as the following: "This prescription is not to be dispensed oftener than ——— without a fresh signature from me." In any hospital even so simple a thing as the ordinary gentian and rhubarb mixture is not supplied time after time without the authorisation of "rep. 14 days," or something of the kind, and if in addition the druggist were compelled to stamp the prescription with a date every time he made it up the patient could not go from one druggist to another, as is occasionally done now, and buy, say, one drachm of the drug he seeks from each. We suppose that any proposal of this sort would meet with the usual silly opposition, and cries of interference with personal liberty and fettering of commerce; but if our parental legislators prevent small boys from playing pitch and toss or "run in" the hard-working and industrious vendor of surprise packets we do not see why they should not try, at any rate, to protect the community from being able to poison itself.

THE annual dinner of the Oxford Medical School was held on June 13th in Magdalen College Junior Common Room (by permission of Mr. H. D. G. Leveson-Gower, president). Professor Arthur Thomson occupied the chair, and amongst those present were the Regius Professor of Medicine (Professor Burdon Sanderson), Professor Howden (Newcastle), Professor Gotch, Dr. J. Ritchie, Dr. G. Farmer, Dr. G. Wilson, Dr. F. G. Proudfoot, and Mr. H. P. Symonds, Mr. A. Winkfield, Mr. L. L. Morgan, &c. There were between forty and fifty present and everything was completely successful. Mr. F. P. T. Hilliard (Magdalen) acted as secretary and treasurer. The ménu card, a very clever design by Mr. C. L. Pilcher (Keble), we hope to reproduce in a coming number.

THE Colonial Office has learned by telegram from the Governor of Hong-Kong that there were 27 fresh cases of bubonic plague in the week ending June 15th and 22 deaths from the plague during the same period.

THE annual general meeting of the Society of Fellows of the Royal College of Surgeons will be held at 146, Harley-street, W., on July 1st, at 5 P.M.

DR. RALFE has resigned the post of Physician to the London Hospital, after sixteen years' service, and has been appointed Consulting Physician.

THE annual mess dinner of the Volunteer medical officers will take place at Limmer's Hotel on Saturday, July 18th.

INTER-HOSPITAL BOAT RACE.—Upon June 11th the annual Inter-Hospital Boat Race from Hammersmith to Putney took place in brilliant weather and was witnessed by a large assemblage. Three hospitals were represented—viz., Middlesex Hospital, Middlesex Station; St. George's Hospital, Centre Station; and London Hospital, Surrey Station. At the first attempt a foul took place between St. George's and Middlesex, and the crews were ordered back to the stake boats. After a short delay, necessitated by the rupture of a thowl string in the St. George's boat, a fresh start was made. Another slight foul between St. George's and London enabled Middlesex to get away with a slight lead. A grand race now ensued for the first mile between Middlesex and St. George's, the former, however, gradually increasing their lead. At the point opposite to the Ranelagh Club the St. George's crew were evidently beaten, and the Middlesex, holding the race well in hand, passed under Putney Bridge with a clear lead of two and a half lengths. London, who rowed a plucky stern chase, finished five lengths behind. The winners covered the course in the excellent time of nine minutes and three seconds.

THOMAS WAKLEY,

THE FOUNDER OF "THE LANCET."

A BIOGRAPHY.[1]

CHAPTER XXIV.

Proceedings at Bow-street.—Wakley continues to fight.—The College institute Criminal Proceedings.—The London College of Medicine.—Its Prospectus.—Its Failure.

SIR RICHARD BIRNIE and his fellow magistrates after deliberation decided that they could not grant Wakley a warrant against Ledbitter, the Bow-street officer who had assaulted him. The reasons for this were not made very clear in words by the worthy knight, who frankly confessed his partial feelings in the matter. He seems to have considered, first, that Wakley was debating in the building of the College affairs that were not collegiate, and that, therefore, the President of the College had a right to have him removed. To this Wakley said that the wrongs of the naval surgeons, whose diplomas and certificates were very generally granted to them by the College, were exactly matters of the highest collegiate as well as professional interest, and that even had they been otherwise the man Ledbitter had struck out at him with his truncheon in a murderous way. Sir Richard Birnie then said that Ledbitter was wrongly arrested, inasmuch as the Bow-street officer who had taken him in custody was not an actual eye-witness of the alleged assault, and it was a general instruction to the Bow-street officers that they should only arrest a man for a wrong-doing of which they had personal ken. To this argument, which was unfavourably criticised from the bench by another magistrate, Wakley responded by exhibiting his ruined clothes to the court and asking if there could be any reasonable doubt that he had been savagely assaulted. The Bow-street officers themselves, moreover, admitted the truth of Wakley's account, merely saying that they had received their instructions upon two separate occasions from the Council of the College to expel Wakley; and they identified a person in court, who turned out to be Mr. Wilde, the solicitor to the College, as the individual who had told them that for whatever they did the authorities of the College would hold them indemnified.

As Sir Richard Birnie would not grant a warrant the matter ceased there as far as legal proceedings on Wakley's part were concerned. Some preliminary steps were taken to bring Ledbitter to justice in another way, but Wakley was not truly desirous of prosecuting the man and did not persevere in the face of tedious formality. If he could have prosecuted the Council of the College for the assault he would have done so; this he said repeatedly, and no one can doubt that he meant what he said, but he was advised that his chance of making out a legal case against them was slender. A moral case, however, was easily to be established against them, and Wakley's pen was not idle. It is characteristic of him that after one powerful outburst of rage, his allusions to the personal indignity that he had undergone became infrequent and dispassionate. The fact that the Council had expelled him by violence and with the assistance of Bow-street officers from the theatre of the College added no bitterness whatever to his strictures. In fact, after the first natural feeling of wrath and insult had subsided he was not ungrateful to his enemies for providing him with so graphic a proof of his contention that they

[1] Chapters I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., XIII., XIV., XV., XVI., XVII., XVIII., XIX., XX., XXI., XXII., and XXIII. were published in THE LANCET, Jan. 4th, 11th, 18th, and 25th, Feb. 1st, 8th, 15th, 22nd, and 29th, March 7th, 14th, 21st, and 28th, April 4th, 11th, 18th, and 25th, May 2nd, 16th, 23rd, 30th, June 6th, and 13th respectively.

were autocratic, careless of the rights of their commonalty, and unscrupulous in their methods of preserving their own position as irresponsible rulers. These three propositions he demonstrated week after week ceaselessly and remorselessly, and concluded by recommending the London students not to affiliate themselves to the College of Surgeons at all but to be content with the licence of the Apothecaries' Hall, which Company charged less in fees and did more to protect its general body. His argument in support of this advice to students was ingenious. It was based on the working of the Apothecaries' Act of 1815, which had been unduly pressed by the Apothecaries' Hall against the College of Surgeons, properly qualified surgeons having been prosecuted by the Hall for dispensing medicines. The Hall, in fact, took active and selfish steps in defence of those possessing its licence, and Wakley, whilst reprobating the institution of prosecutions against the Members of the College of Surgeons, advised the coming men to join the Hall.

This advice may or may not have stung the Council of the College into reprisals; it was calculated to damage the corporate purse, which Wakley said was the tenderest spot in the Corporation, but certainly their next move was a strong and almost unwarrantable one. It was no less than a motion for a rule in the court of King's Bench calling upon Thomas Wakley, Thomas King, George Walker, and George Darby Dermott (whose name had not previously been conspicuous in the proceedings of the reformers) to show cause why a criminal information should not be filed against them for certain misdemeanours committed in the theatre of the Royal College of Surgeons of England on the occasion of the riotous proceedings at the College in protest against the exclusion of the naval surgeons from the King's levées. The motion was heard by Lord Tenterden who made the rule absolute against Wakley and King, and discharged it against the other defendants, stating in his remarks from the bench that it was illegal for the Members to discuss in the theatre of the College any subject not connected with the acknowledged duties of the Corporation.

Wakley undismayed responded with an entire elaborate and cut-and-dried scheme for a new corporation of surgeons to be entitled the London College of Medicine, to have a Royal Charter and to do everything as properly as the existing College did everything improperly.

The London College of Medicine was really a socialistic dream. The idea of founding such an institution undoubtedly sprang up in Wakley's mind as the swiftest and most drastic method of punishing the College of Surgeons. When he formulated the scheme for it he was not in a mood to weigh matters as calmly and judiciously as was his wont, for undoubtedly a great sense of personal anger had been roused in him by the institution of criminal proceedings against him. This bent his judgment, which had not been warped in the least by the violent physical treatment that he had received. He over-estimated—and for the first time—the power of his pen. As a destructive weapon it had proved terrific; he now proposed to employ it in construction. The London College of Medicine, "founded upon the most enlarged and liberal principles, in which all legally qualified practitioners, whether physicians, surgeons, or apothecaries," were to be "associated upon equal terms" and to be "recognised by the same title," was obviously fore-doomed to failure. Below is an abridgment of its prospectus, by which it will be seen that its constitution was really an attack on the College of Surgeons. The new College proposed to do for the public and the profession everything that the old one did not do, and for the neglect of which the more advanced reformers found such bitter fault with it. After a preliminary clause stating that all persons in the United Kingdom at present holding a medical or surgical degree or diploma were eligible to be chosen as Fellows without examination, it proceeded as follows:—

The possessors of the diploma of the London College of Medicine are denominated Fellows, and will enjoy, both in and out of the College, the title of Doctor.

The London College of Medicine will be under the government of a Chancellor, Vice-Chancellor, and Senate.

The Senate will consist of not less than thirty-six Fellows elected by ballot, annually, by the Fellows in general convocation.

The Chancellor, Vice-Chancellor, and Scrutators are elected by the Senate; a majority of the Senate to be present, or the election void; the elections to be conducted by ballot, and the decision of the majority, final.

On each examination of candidates for the diploma, seven of the Senate constitute a medical jury; the Scrutators are ineligible to the office of jurymen.

On each examination the votes of a majority of the jury to decide the candidate's admission or rejection.

The examination of candidates will be conducted in public by the Chancellor or Vice-Chancellor, the Scrutators, and the medical jury.

Candidates are not required to produce any certificates whatsoever; the capability of undergoing a fair and searching professional examination being considered the only professional qualification necessary for obtaining the diploma.

The fee demanded for the diploma of the College is three guineas from gentlemen engaged in practice, and five guineas from students. No candidate after a second rejection to be eligible for re-examination until twelve months shall have elapsed.

Wakley went to his personal friend, who was to be in the immediate future his political god-father, Joseph Hume, for assistance in the matter, and Hume consented to take the chair at the preliminary meetings, which were enthusiastic entirely because Wakley's strictures against the College of Surgeons were so forcible and so amusing. Hume had once been a medical man, but his whole career was now political, and he really did not understand the nature of the departure he was being made to float. If Wakley had submitted his scheme to any man of Hume's talent but who was in touch with the needs of the profession, a lecturer or a man with experience on a hospital staff, he would have received criticism and guidance that would have prevented him from pursuing with so much energy such a will-o'-the-wisp as the scheme for founding the London College of Medicine was bound to prove. But Hume, a reformer and a great politician, almost a statesman, was quite ignorant of the true needs of the medical man or the real extent to which the College of Surgeons had abused its position. He was informed by Wakley, who was too angry at the time to be able to inform him quite impartially, and so when things were referred to his judgment he could only frame an answer in accordance with one-sided information.

But in the absence of competent advice Wakley, with immense perseverance, wrote up the cause of the London College of Medicine, where the ruling body was to be elected by universal suffrage; where there were to be no grades of rank or distinctions in title; where no monopoly in the teaching or the granting of certificates to the taught was to be countenanced; where the fees were to be low and only the standard of courtesy between examiners and examined high. But write as he would he could not galvanise this stillborn scheme into life. It was without the elements of existence. To begin with, unless the Government granted the promoters a charter their association among themselves was no use. Unless the State recognised the diplomas of the new college there would be no inducements to candidates to present themselves to obtain them. Now it was not for a moment probable that Government would have anything to do with the new scheme. A Royal charter had been granted to the College of Surgeons together with much money. Against this charter

a petition had been presented to Parliament which had so little to recommend it to the notice of the House that after a perfunctory order to the impeached corporation to present certain accounts the matter dropped out of notice. The House would certainly consider the new scheme the outcome of private ill-will against the officers of the older body, who had already been recognised by the Crown and were in receipt of public money. To support a rival body designed in every way to ruin that corporation would be to stultify the action of the Crown in granting the charter and to waste the money already granted with no niggard hand. So that if Wakley had been supported by the mass of the College in the way that he confidently expected he had nothing to hope for from Government. But as a matter of fact for the first time the better sort of his own particular followers and readers were not wholly with him. They admitted the perfect unselfishness of his project, but they did not want it. They had no real hate of their College or its authorities. They desired it to be reformed and they thought that Wakley might reform it. But they did not want it destroyed and a new institution with no history and no prestige substituted for it; so that the London College of Medicine died of inanition before anyone save its inventor and a few ardent and not wholly disinterested colleagues would allow that it had ever been born.

The criminal proceedings against Wakley and King also came to a speedy termination. Though supported by Lord Tenterden's rule and dared by Wakley to proceed, the Council decided to let the matter drop. So that the outcome of the great and stormy meeting of Feb. 14th, 1831, was nothing at all save that the naval surgeons were re-admitted to the King's levées, to agitate for which was the reason that Wakley summoned the Members together. Wakley was advised that he could not prosecute the Council, and he did not desire to prosecute Ledbitter. The Council having been successful in their initiatory steps against Wakley decided that it would be impolitic to proceed further. The London College of Medicine, instituted to meet the wants of the rank and file of the profession and to take the place of the College of Surgeons, whose behaviour towards its members was so ruthless, came to an early and inglorious end.

(To be continued.)

THE ROYAL MILITARY TOURNAMENT.

To state that this year's meeting at the Agricultural Hall has been a successful one in all respects is to convey but an inadequate impression of the entirely satisfactory nature of the financial results of the show, which, we believe, have completely eclipsed any former record. Crowded afternoon houses day after day and overcrowded evening houses were the rule, with hundreds unable to find seats or standing room, walking about the gangway encircling the arena content to listen to the band and see what could be seen of varied uniforms, magnificent horses, and wonderful guns. Lord Methuen and his committee of management, though hampered by many unforeseen obstacles, have not failed to organise an entertainment quite equalling any presented in former years.

As one of the features of the London season the Royal Military Tournament has undoubtedly taken firm root and become dear to the heart of the public; and in view of the keen interest evinced in the show by all classes—an interest practically demonstrated by the thousands turned away at the doors for want of accommodation—it may not be out of place to suggest to the committee that the time has arrived for providing this great yearly fixture with a more suitable abiding place. The Agricultural Hall, though large, is neither sufficiently large nor commodious enough either for the men, horses, and guns which provide the spectacle, or for the overwhelming multitudes that throng to witness it. Though much has been done to improve the accommodation, lighting, ventilation, and general sanitary arrangements at the hall, it must be conceded that the building in many respects is unworthy of the great military gathering of the year. Its situation is by no means central, its approaches cannot be said to be good; and for want of space the unavoidable mixing up of perambulating audience, performers, horses, and artillery in a narrow circular passage within the building is neither satisfactory nor safe to the visiting public.

In all contests in which strength, swiftness, and equestrian exercises are concerned accidents to competitors may be looked for, and this year's tournament, though comparing in this respect favourably with bygone meetings, has not passed without casualties. At the rehearsal before the opening performance Captain Cowie, R.E., who was superintending the attack on the Afghan Fort at the end of the arena, fell from the trestle bridge, some sixteen feet, upon some planking below, alighting in a sitting posture upon the ischial tuberosities. On examination no fracture was apparent, but this officer has suffered much since from shock and contusions, the last account of him being that he was doing well though still confined to his bed. It is only right to mention that Captain Cowie came by his fall in a generous effort to prevent five or six other men from reaching a plank gangway which he thought insecure. On the morning of Thursday, June 4th, First-class Sergeant-Instructor of Fencing Foerster, Army Gymnastic Staff, who was judging at sabre practice for two officers, was the victim of a very lamentable accident. In his eagerness to judge correctly Sergeant Foerster happened for an instant to approach too closely the arc described by the sabre of one of the combatants, who was suddenly swinging it back to deliver a back-handed cut, when the tip of the sabre struck and completely ruptured the globe of Foerster's right eye with escape of the vitreous; the globe was so much disorganised that it was decided to extirpate it next morning. On Friday, the 5th, at the rail jump in the arena the horse of Rough-Rider Sergeant Rumsey fell and rolled upon him, causing temporary collapse: it is supposed that the cantle of the saddle came into violent contact with the abdomen as there has been much tenderness accompanied with some bruising, but with no rise in temperature or other grave symptoms since. With the exception of a slight concussion from a fall from a restive horse upon the paving outside the entry to the arena no other accident of importance occurred amongst the troops quartered at the hall. Various minor casualties occurred: a sprained knee from jumping, sundry contusions due to kicks from restive horses in stables, and some slight bruises and lacerations in the several competitions—in, for example, bayonet *v.* bayonet, in which Corporal of Horse Elliott sustained a contused and lacerated right thumb, which probably might have been averted had the right as well as the left hand been gauntleted. Most of the accidents recorded at this and at similar meetings have had their origin in the undue eagerness and haste of the competitors, a species of carelessness which it is difficult to prevent. The management, indeed, does its utmost to guard against casualties by insisting that the usual school of arms clothing shall be worn by all competitors—viz., helmets, masks, gauntlets, sporrans, padded jackets, and so forth—and it is to be congratulated upon the excellent condition of the arena this year, as proved by the non-occurrence of any overturning of the guns in the horse artillery galloping, of which this tournament has seen more than usual. We may suggest to those responsible for the furniture of the ring, however, that the rail jump should be invariably whitened, and that a thick layer of tan might with advantage cover the floor over which any future trestle bridge may be erected in a combined display. And, further, that those judging at sabre competitions as well as the competitors themselves should wear masks.

We are glad to note that since last year the free circulation of air throughout the building seems to have been secured, the temperature during an evening performance inside the arena being by no means oppressive; this improvement is partly due no doubt to the increase in the number of electric lights and the almost total abolition of gas as an illuminant. The removal of the greater number of the horses also to new stables adjoining the main building has further improved the atmospheric conditions, and the noticeable absence of ammoniacal stable effluvium was no doubt due to the free use of peat-moss litter, which we understand is coming into general use in our cavalry stables.

As in previous years, a temporary station hospital for the troops of two beds was established in a hut within an

enclosure at the eastern end of Barford-street immediately outside the Agricultural Hall. Any accident or case of sickness requiring nursing was housed here for a night or so only, being transferred to the district hospital at Rochester-row as early as possible. A detachment of the Medical Staff Corps furnished orderlies for nursing duties at the Barford-street hospital, and a bearer-party with stretcher and all First Aid requisites was stationed under the Royal box during the whole of each performance, one medical officer also invariably being on duty in the judge's enclosure. As we have previously stated, the principal medical officer was Surgeon-Major Alexander, Coldstream Guards, whose arrangements for the immediate treatment of accidents were most excellent, assisted by Surgeon-Major Lawless, A.M.R., and Surgeon-Lieutenant K. Cameron, A.M.S.

The quantity and quality of the rations supplied were excellent, and the water-supply, lavatory, and latrine accommodation for the troops appeared to be ample. The men slept in cubicles on the gallery floor, as during the last two tournaments. As much as possible was done, by instituting cross ventilation, to render the atmosphere pure at night; some of the stables, however, appeared to us to be very oppressive, the probable explanation of this being the large amount of glass roofing used in their construction. Last year we called attention to the inconvenience caused to the men by the hot rays of the sun pouring through this glass roofing, and suggested as a preventative measure the use of a strip of canvas. We are glad to be able to report that this has been noted by the new committee and the roofing over the galleries has been distempered with whitewash. Another desirable improvement, due, we believe, to the indefatigable secretary, Major Eyre Crabbe, is the provision of baths for the men. These have been greatly appreciated.

We again draw attention to what we consider a danger to public safety—viz., the possibility of kicks from horses, &c., to people admitted through the Upper-street turnstiles, who, to reach their seats, must frequently pass behind a row of horses drawn up and about to enter the arena. An alley-way could easily be devised through St. Stephen's Hall by which this danger would be minimised. The proprietors of the hall might with advantage, we think, provide more than one cloak-room and lavatory for ladies.

Upon inquiry we ascertained that for this large muster of troops only one temperance bar had been provided by the contractors. We offer the suggestion to Messrs. Probyn and Co. that an additional temperance bar should be opened on the ground floor of the hall, and though officers and the general public may perhaps be charged fancy prices for mineral waters and other temperance beverages—we do not, however, approve of this—the private soldier, with his hard-earned, scanty pay, should not pay other than canteen prices for them. It is quite possible to make a respectable profit and at the same time to supply the soldier with ginger-beer, soda water, &c., at 1*d.* a bottle.

Chief-Surgeon Osborn, Dr. Harris, Dr. Hunter, with others of the St. John Ambulance Association, with a party of attendants of the St. John Ambulance Brigade, established an ambulance station in the arcade, where first aid was given in minor casualties of the kind usually found in any great concourse of spectators. We visited the ambulance station in the arcade, which consisted of one small cubicle, and appeared to serve for the reception both of female as well as of male applicants. We can scarcely congratulate the Tournament Committee this year upon the change that has been made in doing away with the very efficient ambulance service which gave so much satisfaction to the public for the last four years, a service which provided two well-equipped but separate receiving rooms for the treatment of male and female accident cases. This was as it should have been, and if the change has been made on the score of economy we cannot help being of opinion that the economy was ill-advised. Altogether, about 800 men, 390 horses, and some sixteen field guns were engaged in this year's tournament.

The general health of the troops has been excellent, and where as many as 800 or 900 men are gathered together from all parts of the kingdom under one roof and under many trying conditions this is no small matter, and speaks well for the general care of the soldier evinced by those responsible for it.

At some of the evening performances the overcrowding amongst the shilling spectators, wedged together in one enormous mass, was somewhat alarming. That this was felt to be so was proved by the request of a certain number to be released from the tightly packed crowd. This could only be done by hauling out individuals here and there into the arena. It is this vast shilling audience, hitherto provided with standing room only, which by its nightly patronage so largely contributes to the tournament treasury, and we venture to suggest to the management that some seating accommodation, tier above tier, might be provided for it. On the score of public safety it would be desirable, and as there would thereby be less restlessness and shifting in the crowd, it presumably would do away with much of the nervous fright of the horses which is so apparent and pitiable to witness when they have to make the circuit of that side of the arena.

Veterinary-Major Rowe, of the Home District, was the principal veterinary officer in charge of the horses, which were probably more numerous at the Agricultural Hall this year than at any former tournament.

THE ANNUAL REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1894.

[CONCLUDING NOTICE.[1]]

IN our last notice we passed in review and commented upon some of the points raised in the Sanitary Commissioner's report connected with the great prevalence of enteric fever among the European troops serving in India, as compared with that of the native army and the gaol population, and alluded to the great and apparently increasing drain and lamentable loss of life caused by that disease on the young manhood of the European force in India. We also adverted to the excellent analysis of the current views held by pathologists and epidemiologists in regard to cholera set forth in the sixth section of that report. We purpose now to touch upon some points connected with malarial fever, dysentery, and hepatic abscess, but before doing so would call attention to some general points that appear to merit consideration.

In the report of the Royal Commission on the Sanitary State of the Indian Army issued in 1863 the estimated mortality of the Company's troops during the years from 1800 to 1856 is stated to have oscillated between 69 and 70 per 1000. The Royal Commission, in calculating the saving of "army life" that might be effected by the application of ordinary sanitary methods, said that the death-rate of 20 per 1000 ruling among Indian Civil servants ought to be attainable for soldiers. They went beyond this and expressed a belief that in times of peace the death-rate among men of soldiers' ages in India might even be reduced to 10 per 1000 per annum, and subsequently in 1883 it actually was only 10·88 per 1000. Of course, the death-rate of a single year cannot be accepted as an indication of permanent improvement. India is the land of epidemics, and the presence or not of such disease-causes will make all the difference; but, allowing for ordinary fluctuations, the sickness and death-rate of late years among European troops in India seems to have been increasing on the whole, and we appear to be losing some of the ground that had been previously gained in this respect, notwithstanding that the ratios are, of course, far more favourable than they used to be when the life-conditions and environment of the British soldier serving in India were so different to what they are now. Prior to the introduction of the short-service system and apart from sanitary changes that have since been effected in India, the men were much older and of longer service, and they died from diseases incidental to service in hot climates under those conditions, whereas now that they are much younger and have relatively short periods of service in India they die disproportionately from enteric fever. It would be interesting to institute a comparison between the death-rates of men of thirty years of age and over and those of soldiers of from twenty to twenty-five years of age from enteric fever and the diseases which are especially incidental to young soldiers recently arrived in India. We require, if possible, to have some plain tabular statement of the loss and gain in these respects and of the actual, and

[1] The First and Second Notices were published in THE LANCET of May 9th and 16th, 1896, respectively.

not merely the apparent, improvement which has taken place. It is very difficult amid the numerous and voluminous tables in the report for the reader to find out exactly what he wants to know. Does the increased liability of the young and recently arrived soldier to die from enteric fever counterbalance or not the greater liability of older soldiers of longer service in India to die from other diseases? While there is a very gratifying reduction in the death-rates from the more important diseases this is certainly not the case as regards enteric fever, for it has for some years past been the most important disease-cause in the Army of India.

While on this subject we would also suggest that not only should the health statistics be tabulated for corps, but for the stations and barracks occupied by them. If this were done locally for some years, as it probably is, the topographical medical history of every military station and of the various barracks in them could be registered and preserved for the guidance of successive military and medical authorities in locating the troops and in forming an estimate of the nature and amount of the diseases that might be expected to appear in different localities and barracks in a given time under given conditions. To this should be added a topographical description of the stations and barracks, with their food and water supplies, camping-grounds, &c. In that way we should have a valuable continuous record of the accumulated and accumulating results of local medical and sanitary experience. Moreover, it seems to us that, in addition to headquarters' sanitary bureaux and bacteriological institutes, there should be some organised method for having the causes of any local outbreaks of disease inquired into at once, with a view to the prompt application of practicable remedial measures. For this purpose there should be some public health organisation and officers, with a local board composed of an officer of the Public Works Department with a special knowledge of sanitary engineering, a medical officer specially skilled in hygiene, and a member of the Quartermaster General's Department in every military district or large station cantonment, for the purpose of undertaking such investigations whenever their services were called for. The application of the results of bacteriological researches to the investigation of disease-causes is an essential part of the sanitary organisation; but it is, after all, only a means to an end. A practical sanitary machinery is necessary to carry on effective work in this direction. However interesting it may be in a scientific sense to demonstrate the existence of a special parasitic micro-organism in connexion with any given disease, the practical utility of such a discovery is small if we are merely to content ourselves by relegating it to that as the cause.

As regards malarial disease in India, the climatic difficulties, the comparative absence of drainage works, and the great and prohibitive cost of their construction, together with the poverty and ignorance of the natives, undoubtedly form enormous obstacles in the path of the sanitarian. Still, the sanitary history of London in the middle ages is the history of all old neglected towns and the remedies are very much the same. London with its vast population has been cured by the drainage of the subsoil and houses, by rapid removal of sewage to a distance, by closing wells and substituting water of better quality, by good paving and surface drainage, and by rigid attention to cleanliness. The practical remedies for malaria in many parts of India are to lower the water level and increase the movement of the subsoil water. Ague gave rise to about 27 per cent. of the admissions from all causes in the European army in India. Section 6 of the report contains a reference to the investigations into the micro-pathology of malarial fever that have been carried on in many parts of India, especially by Surgeon-Major Ronald Ross in Madras, Surgeon-Captain Murray in the Punjab, and Surgeon-Captain Maynard in Calcutta. Ever since the discovery of Laveran's blood parasite medical officers in India have naturally been keenly interested in the subject. A considerable amount of work has also been done by Carter, Cunningham, and Crombie.

Dysentery was, as usual, most prevalent in the Madras army. The number of deaths from hepatitis was increased in 1894 by twenty-three. The percentage of hepatic abscess in the total causes of death was highest in Burma Coast. The remarks on the relative prevalence of dysentery and hepatic abscess among European troops, native troops, and gaol population, and the pathological observations on these diseases with references to recent literature on these subjects contained in the sanitary commissioner's report, are well worth reading. That there is a real connexion between the two diseases may be considered as a well-established fact. The origin of this abscess seems, however, to be also dependent on some climatic influences. Europeans in the tropics are more liable than natives and the same is the case in Egypt. Apart from dysentery, hepatic affections and abscess are frequent among European residents. The natives of India are more liable to dysentery and malarial fever, but less liable to hepatic abscess, than the European temporary sojourners in the country. The highest ratio of admission from dysentery among European troops from 1870 downwards was 54·1, and the lowest 24·5; among native troops the highest was 96·3 and the lowest 39·3; among prisoners the highest was 113·3 and the lowest 79·4. On the other hand, the highest admission ratio from hepatitis among European troops in the same period was 58·1 and the lowest 18·1; the highest among native troops was 2·5 and the lowest 1·4; the highest among prisoners was 1·9 and the lowest 0·8. The dysentery of Europe is rarely followed by abscess of the liver. It is said that Roumania is the only European country where hepatic abscess is frequent as a complication of dysentery.

The report contains over 300 pages, with upwards of 200 more pages of annual returns and tables, and there remain quite a number of subjects and points on which we have not touched, but we have said sufficient to show that it is, in our opinion, an able official document, and that it affords a large amount of instructive and condensed information on a variety of subjects for those interested in the study of tropical medicine and hygiene.

THE HOLIDAY SEASON.

(*Continued from p. 1666.*)

THE LONDON AND NORTH-WESTERN RAILWAY COMPANY.—The inter-communication between the various railway companies in the British Isles makes it almost impossible to say exactly just where each line begins and ends, and the London and North-Western is no exception to the rule. The line from London communicates with Cambridge, Peterboro', Northampton, Rugby, Birmingham, Stafford, Crewe, Manchester, Leeds, York, Sunderland, Liverpool, and Newcastle; Glasgow, Edinburgh, Oban, Inverness, and Aberdeen; Dublin and Belfast, and various places in Wales. *Viâ* Dover, Folkestone, and Newhaven, the company issues through bookings to the Continent. Carlisle, the town which will this year be honoured by the presence of the British Medical Association is reached by this line, and no doubt excursions will be run during the time the meeting is in progress. The tourist programme, which embraces a comprehensive list of tours in England, Ireland, and Scotland, including the Lake District, North Wales, and the Isle of Man, is supplied gratis on application at the company's offices. The time-table gives particulars of the Continental routes.

THE GREAT WESTERN RAILWAY.—During the summer months this company will run cheap excursions to Bath, Bristol, Weston-super-Mare, Taunton, Ilfracombe, Exeter, Torquay, Plymouth, Falmouth, Penzance, Yeovil, Dorchester, Weymouth, Channel Islands, Shrewsbury, Welshpool, Barmouth, Aberystwyth, Ireland, and the Isle of Man. Visitors to any of these places will no doubt appreciate the list of seaside and country lodgings, boarding-houses, and hotels in districts served by this company, including Guernsey and Jersey.

THE SOUTH-EASTERN RAILWAY.—The programme of continental and local tourist and excursion arrangements giving particulars of special reduced fares and the list of farmhouses, hotels, and country lodgings in the districts served by this company is worth consulting.

SCOTLAND.

THE WEST HIGHLAND RAILWAY COMPANY.—Those who contemplate spending their holidays amidst the charming wild scenery of the West Highlands cannot do better than procure a copy of "Mountain, Moor, and Loch," a capital guide book to the district, illustrated with 230 original drawings and abounding in historical and literary allusions. The Highlands and Islands of Scotland include some of the most beautiful scenery in the world, and few places offer the advantages here presented for tourists. Grantown and Strathpeffer are both on this company's lines, the first

with a climate which is said to be beneficial in pulmonary complaints and the latter well-known for its medicinal springs. To describe the West Highlands of Scotland here is unnecessary, and full particulars as to train and fares can be obtained on application to the General Manager of the Highland Railway Company, Inverness. It may not be out of place, however, to give our readers the reason why, according to the author of "Mountain, Moor, and Loch," a lobster is known in the West Highlands as a "Banarie flea." The story runs that an American stopping in the Banarie Hotel made himself obnoxious by his contemptuous remarks on Scottish scenery. "Ben Nevis"? he said, "do you call that a mountain? You should see our mighty Rockies! Loch Linnhe? do you call that a lake! You should see our Lake Superior! Rannoch Moor? do you call that a plain? You should see our western prairies"! and continued in this strain to the intense exasperation of the Highland waiter who went and procured a live lobster which he secreted in the American's bed in requital of the insults. Hardly had the American gone to sleep when the lobster caught him by the toe, causing him to jump out of bed with a yell. "Boots" appearing on the scene, the American (rubbing his big toe as he spoke) thus solemnly addressed him: "Boots, you may not have such big mountains and big lakes and big plains here as we have in the States, but you have the most tarnation big fleas I ever experienced."

THE CALEDONIAN AND LONDON AND NORTH-WESTERN RAILWAY.—Summer tours in Scotland and England, published conjointly by these companies is an illustrated handbook containing descriptive notes of the chief points of interest on the journey to Scotland with itinerary of tours, fares, &c. A good map of England and Scotland accompanies the book, together with plans of Edinburgh and Glasgow.

NORTH BRITISH RAILWAY.—The tourist arrangements of this company embrace some interesting tours in Scotland.

IRELAND.

Considering the wild and bewitching nature of the scenery of the Emerald Isle it is passing strange that the Isle of Erin does not attract more visitors. The railway companies are, perhaps, not quite so smart as those in England, but slowness is an advantage sometimes, and the tourist in Ireland will be amply repaid for any inconvenience he may be put to in this direction.

THE GREAT NORTHERN RAILWAY OF IRELAND in their tourist and excursion programme publish a selection of tours from Dublin extending to Londonderry in the north, Belfast on the north-east, and Bundoran on the north-west coast. This latter place is reached by the ordinary rail service in five or six hours from Dublin, Belfast, or Londonderry, and is surrounded by the districts of Lough Erne, Donegal, and Sligo, the scenic charms of which are all well known. The Valley of the Boyne, too, with its historic associations, will well repay the visitor. Full information and interesting pamphlets describing various parts of the district covered by this railway can be obtained on application to the company's offices in Dublin.

THE GREAT SOUTHERN AND WESTERN RAILWAY.—The iron ways of this company intersect the southern portion of Ireland, extending through the far-famed Lake district of Killarney to Valentia Harbour. The time-table of the company details a list of tours which should suit the convenience of all, and a tastefully printed illustrated booklet describes the lakes and fjords of Kerry, which embrace scenery which the present Poet Laureate has fitly described as enchanting. A glance at the illustrations in the booklet will, however, do more to impress the reader with the beauty of the district than words could do.

THE CORK, BANDON, AND SOUTH COAST RAILWAY.—This company also issues an illustrated booklet describing the journey from Cork to Glengariff and Killarney known as the Prince of Wales route. In advising tourists to Ireland to write to the company for a copy of the pamphlet we need do no more than quote Thackeray, who has said, "Within five miles round the pretty inn of Glengariff there is a country of the magnificence of which no pen can give an idea."

WALES.

THE CAMBRIAN RAILWAYS.—"Picturesque Wales," price 6*d*., a handbook of scenery accessible from the Cambrian Railways, will repay a perusal even by those who have decided to spend their holidays elsewhere. It is well illustrated, and contains what many of the railway handbooks lack, a good index. For wild and picturesque scenery and legendary tales Wales has few equals, and the archæologist, the botanist, and the painter will all find ample material for study and recreation. Those, too, who revel in the mysteries of orthography can—and we say it with all due reverence—follow their favourite pursuit by inquiring into the meaning of such soul-stirring names as Cwm-Bychan, Cwmhir, Llanfihangel-geneu'r-glyn, Ynys-y-maengwyn, and others, whose "linked sweetness long drawn out" cannot but charm. The tourist, excursion, and seaside arrangements for the season give some exceptional facilities to visitors, and a feature of the Cambrian Railways is the issue of cheap weekly season-tickets, enabling the holder to travel by all trains and between all coast stations, including Machynlleth and Dolgelly. Over 1000 miles can thus be travelled for 15*s*. third-class or 25*s*. first-class. Express trains with first- and third-class lavatory carriages are run daily during the season in connexion with fast trains on the London and North-Western, Great Western, and other railways between London, Liverpool, Manchester, Birmingham, &c. The Cambrian Railways "Souvenir of Wild Wales," price 6*d*., containing fifty-five views, is a capital little publication. Time-tables, tourist programmes, guide books, and full particulars of trains, fares, &c., may be obtained at any of the company's stations or booking offices, and at Cambrian Office, Crue Woode Buildings, 17, Back Goree, Liverpool; on application to Messrs. Henry Gaze and Sons, Limited, Excursion Tourist Agents, Strand, London; or to the Passenger Superintendent, Oswestry.

(To be continued.)

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on the 11th inst., the President, Mr. CHRISTOPHER HEATH, being in the chair.

On the recommendation of the Committee of Management it was resolved (1) that the Forest School, Walthamstow, be added to the list of recognised places of instruction in chemistry, physics, and practical chemistry; and (2) that the East London Hospital for Children, Shadwell, be recognised as a place of study during the fifth year of the curriculum.

The Laboratories Committee presented a report on the work on diphtheria for the Metropolitan Asylums Board as follows: (*a*) Examination of material for diagnosis; since March 6th 3705 specimens have been examined and reported upon. The average number of specimens examined per diem has been 47·5. (*b*) The preparation of antitoxic serum; since March 6th the director has supplied 3910 doses of antitoxic serum for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, and all the demands have been fully met. In addition to the number of doses sent out a considerable addition has been made to the reserve stock set aside to meet extra calls should they arise.

The Deputation Committee recommended that the deputations of Fellows and of Members be informed that as the Council had determined to take a poll of the Fellows on the question of the representation of the Members on the Council it was inexpedient to consider any other points involving alterations in the Charter of the College. The recommendation was adopted, and it was resolved to send similar replies to the movers and seconders of the resolutions carried at the annual meeting of Fellows and Members in November, and at the January meeting of the Fellows. A letter was read from Mr. H. P. Dunn forwarding a copy of a resolution adopted by the Committee of the Association of Fellows, suggesting the points which should be submitted to each Fellow on the question of the representation of Members of the College upon the Council. It was referred to the committee on the circular to the Fellows, and the Council authorised the committee to receive representations in writing in reference to the subject. It was resolved, on the suggestion of the Secretary, that the Calendar should be made up to Aug. 1st in each year in order that it might include the results of the elections to the Council in July. A letter was read from Mr. Reginald Harrison and Mr. John Langton reporting their attendance as the representatives of the College at the Congress of the Surgical Society of Germany.

METROPOLITAN HOSPITAL SUNDAY FUND.

THE following are some of the principal amounts received at the Mansion House, the lists of which have been received at THE LANCET Office, up to the time of our going to press on Thursday, when the total amounted to nearly £17,000. The total sum recorded at the corresponding period last year was nearly £15,000:—

	£	s.	d.
St. Michael's, Chester-square (with additions) . .	1495	0	0
Christ Church, Lancaster-gate	1257	16	7
St. James's, West Hampstead	320	3	1
St. Nicholas, Chislehurst (including £100 from Mr. Richard Foster)	335	11	0
St. Michael's, Paddington	167	16	8
St. Andrew's, Wells-street	140	16	9
All Saints', Ennismore-gardens	502	4	0
Westminster Abbey	220	19	6
St. Alban's, Streatham	204	1	3
All Saints', Clapham-park	129	7	0
Union Chapel, Islington	112	0	0
Christ Church, Gipsy-hill	108	0	0
Holy Trinity, Rochampton	108	9	5
St. Paul's, Avenue-road	111	17	10
St. James's, Kidbrook	120	3	8
St. Peter's, Brockley	120	0	0
St. Mark's, North Audley-street	102	9	0
Holy Trinity, Sydenham	206	13	0
St. Mary's, Bryanston-square	263	3	2
St. Columba's, Pont-street	121	0	0
Greek Church	104	14	0
St. Thomas's, Portman-square	114	9	0
St. John's Presbyterian Church, Kensington	126	5	0
Christ Church, Highbury	107	3	7
Holy Trinity, Tulse Hill	156	13	9
St. Paul's, Beckenham	163	13	7
St. Stephen's, South Dulwich	176	0	0
St. George's, Bickley	85	6	0
Holy Trinity, Marylebone	91	2	7
All Saints', Clapham-park	53	18	3
St. Saviour's, Clapham	29	7	1
St. James's, Garlickhithe	38	13	8
Islington Parish Church	20	0	0
St. Anne's, Wandsworth	28	9	5
St. Luke's, Berwick-street	34	1	5
Hornsey Parish Church	49	15	10
St. Mary's, Brookfield, N.W.	22	2	2
West Ham Parish Church	25	1	1
St. Saviour's, Southwark	26	12	2
Metropolitan Tabernacle	114	15	9
Holy Trinity, Eltham	57	17	3
St. John's, Redhill	40	1	1
St. Michael's, Paddington	167	16	7
The Chapel, Dulwich College	60	19	0
St. James's, Hatcham	80	0	0
All Saints, New Cross	57	10	0
Royal Military Chapel, Wellington Barracks	74	6	1
St. Luke's, West Holloway	42	8	0
Emanuel Church, Wimbledom	74	14	9
St. Saviour's, Highbury	35	7	2
West Wickham, Kent	35	7	3

	£	s.	d.
Loyal United Friends, St. Luke's, E.C.	45	0	0
St. John's Wood Synagogue	32	0	0
The Parish Church, Mitcham	33	10	0
St. Barnabas, Addison-road	140	13	8
St. Peter's, Eltham	50	14	0
St. Paul's, Great Portland-street	63	10	0
St. Mary's Parish Church, Acton	41	3	10
St. Mary's, Spring-grove	34	15	2
All Souls, Mansfield-street	44	15	9
St. Paul's, South Hampstead	112	5	3
St. Mary's, The Boltons, S.W.	85	0	0
Holy Trinity, Knightsbridge	58	9	0
The Parish Church, Hampstead	74	0	6
The Parish Church, Dartford	36	10	6
St. Matthew's, Red Hill	34	18	5
The Parish Church, Bromley	84	4	2
St. James's, Muswell-hill	55	4	3
St. Mary Magdalen, Peckham	36	5	3
St. Anne's, Highgate-rise	26	12	0
Wesleyan Church, Blackheath	22	12	9
St. Barnabas', Dulwich	21	17	6
Harrow Weald Church	27	10	10
Northwood Church	28	4	3
Holy Trinity, Lyonsdown, New Barnet	26	8	1
Wesleyan Church, Holly Park, N.	27	5	0
St. Peter's, Norbiton	20	0	0
"Delta" (a further)	200	0	0
Guesdon Trustees	311	15	1
Legacy (John Smith)	500	0	0
Edward Chas. Healey, Esq.	105	0	0
"In Memoriam" (Crosby Lockwood)	20	0	0
St. Anne's, Soho	74	5	4
Miss Emily Old	25	0	0
St. John's, Clapham-rise (first instalment)	30	0	0
Old Malden Parish Church	91	10	9
St. Mary's Parish Church, Finchley	41	10	11
St. Andrew's, South Streatham	30	11	2
All Saints', Foot's Cray	26	1	0
St. Paul's Cathedral	249	0	6
Brixton Congregational Church	58	11	9
J. D'Arcy Hartley, Esq.	25	0	0
Colonel Sir Reginald Hanson, Bart., M.P., Alderman, &c.	10	10	0
St. Mary's (Old Church), Stoke Newington	35	1	0
St. Stephen's, Westminster	45	0	0
Christ Church, Chislehurst	58	8	7
St. Giles's (Parish Church), Camberwell	85	15	10
Christian Evidence Society (East London Branch)	55	0	0
F. F.	21	0	0
St. Mary Magdalen, Enfield	30	14	11
St. James's, Camberwell	30	5	0
St. Andrew's, Leytonstone	46	14	11
Westbourne-grove Presbyterian Church	82	0	7
Major Jones	20	0	0
Christ Church and St. Andrew's, Hornsey	74	0	7
Harrow Weald Church	27	10	10
St. Paul's, West Brixton	23	16	9

Other amounts have been received and will be published in our next issue.

THE ARMY MEDICAL STAFF.

THE annual dinner of the officers of the Army Medical Staff was held in the Whitehall Rooms of the Hôtel Métropole upon June 15th. The following officers and guests were present:—

Director-Generals: J. Jameson (in the chair), and Sir W. A. Mackinnon, K.C.B., Q.H.S.

Surgeon-Major-Generals: A. F. Bradshaw, C.B., Sir J. Fayrer, Bart., K.C.S.I., Q.H.P., A. H. Fraser, J. Inkson, E. C. Markey, C.B., J. B. C. Reade, C.B., Q.H.S., P. B. Smith, W. Taylor, W. A. Thomson, Q.H.P., J. J. Thompson, and W. M. Webb.

Surgeon-Colonels: M. Cogan, R. W. Clifton, W. G. Don, J. H. Hughes, Sir R. W. Jackson, Kt., C.B., J. H. Jeffcoat, G. McGrath, T. O'Farrell, W. S. Price, W. Riordan, W. Sly, H. R. L. Veale, and J. Watts.

Brigade-Surgeon-Lieutenant-Colonels: G. Andrew, J. M. Beamish, J. F. Beattie, A. L. Browne, A. F. S. Clarke, J. A. Clery, R. de la C. Corbett, D.S.O., A. Doig, E. J. Fairland, W. J. Fawcett, E. Footner, M. M. Gallwey, J. Hector, J. W. Hulseberg, L. A. Irving, J. Johnston, M. Knox, J. G. Leask, C. Mackinnon, H. W. Mackinnon, D.S.O., W. H. Macnamara, A. Macrobin, J. W. Morgan, W. F. Ruttledge, W. F. Stevenson, F. P. Staples, W. Temple, V.C., T. Wright, and T. W. Wright.

Surgeon-Lieutenant-Colonels: W. B. Allin, F. E. Barrow, G. D. Bourke, W. Donovan, W. C. Gasteen, W. L. Gubbins, G. H. Le Mottee, N. McCreery, T. Ligertwood, and W. S. Pratt.

Surgeon-Majors: W. G. A. Bedford, U. J. Bourke, Sir J. R. A. Clark, Bart., A. E. Croly, A. Dodd, J. B. Emerson, R. F. D. Hackett, R. D. Hodson, J. W. Jones, H. C. Kirkpatrick, J. Maher, E. L. Maunsell, J. McGill, W. O'Sullivan, E. R. Power, G. W. Robinson, M. R. Ryan, and H. O. Trevor.

Surgeon-Captains: G. Cardew, T. H. F. Clarkson, H. A. Cummins, J. G. Deacon, H. P. Elkington, J. Fayrer, E. M. Hassard, H. St. G. S. Hore, R. W. H. Jackson, J. Moir, F. J. Morgan, D. M. O'Callaghan, R. J. Power, J. Ruxton, and R. J. Windle.

Guests present: Mr. Christopher Heath (President of the Royal College of Surgeons of England), Surgeon-Major-General W. R. Hooper, I.M.S., Brigade-Surgeon-Lieutenant-Colonel H. Smith (3rd Volunteer Battalion, Hampshire Regiment), Surgeon-Major W. Collingridge (Militia Medical Staff Corps), Dr. H. P. Cholmeley, Mr. E. Hart, and Mr. Vesey Holt.

Guests invited, but unavoidably absent: Dr. Wilks, President of the Royal College of Physicians, Sir James Dick, K.C.B., the Director-General of the Medical Department of the Royal Navy, Sir W. Guyer Hunter, K.C.M.G., Q.H.S., Volunteer Medical Staff Corps.

We are glad to see that the number of officers present showed an increase over last year, ninety-five as against seventy-five, and we trust next year to see an even larger

attendance. The arrangements were under the care of the hon. secretary to the dinner committee, Brigade-Surgeon-Lieutenant-Colonel Hector, to whom every credit is due, both for his excellent management and the untiring way in which he looked after the guests.

THE GENERAL MEDICAL COUNCIL:

THE RESIGNATION OF MR. WHEELHOUSE AND SIR WALTER FOSTER.

WE have received for publication the following letter addressed by Mr. Wheelhouse and Sir Walter Foster to the profession announcing their intention of not offering themselves for re-election at the expiration of their term of office on the Council in November next:—

TO THE MEMBERS OF THE PROFESSION IN ENGLAND AND WALES.*

GENTLEMEN,—Ten years ago, after a struggle of many years' duration, Parliament conceded the boon of Direct Representation of the Profession on the General Medical Council, and you did us the honour to elect us as your first representatives. During those ten years we have endeavoured to serve you to the best of our ability, and have never lost sight of your true interests. We are not without the hope that we have been of service both to you and to the Council—to you, by acting as your exponents in the various questions of professional importance that have from time to time been brought under the notice of the Council, and to the Council by seeking temperately to place your views before it and, as far as possible, to assist in carrying out its general work. In what we have succeeded and in what we have failed we are content to leave the history of the Council to determine; but, so far as your wishes have been compatible with the Acts of Parliament which it is the duty of the Council to administer we have never lost sight of them or failed to advocate them to the utmost of our power.

The time has now come when, for the third time, you are called upon to choose your representatives, and, after careful and anxious consideration, we have determined to ask you to release us from the responsibility of the office. We desire most cordially to thank you for the great honour you have conferred upon us by twice entrusting us with your interests, and also to place on record our grateful sense of all the kindness we have personally received at the hands of every member of the Council, and especially of the various presidents under whom it has been our privilege to serve.

In conclusion, we would urge you to make very deliberate and careful choice of your future representatives, remembering the high order of the duties the Council is called upon to exercise, and when you have elected them to give them that moral support without which it is impossible for them efficiently to represent you.

We are, gentlemen, your obedient servants,

C. G. WHEELHOUSE.
B. WALTER FOSTER.

June 12th, 1896.

THE CROYDON BOROUGH HOSPITAL, WADDON.

THE new buildings of the Croydon Borough Hospital were opened on Saturday, June 6th, and the municipality is to be congratulated on possessing a permanent isolation hospital of the most approved type. The triangular site on which the pavilions have been erected comprises eight acres of land moderately elevated and situated some two miles from the more populous portions of the district. Accommodation is provided for 116 patients. We have not space to describe in detail the various wards and administrative blocks which constitute the hospital, but there are one or two points specially worthy of notice to which we may refer. In the first place everything has been done to make the wards as comfortable and attractive as possible in order that patients requiring isolation may be induced to take advantage of the accommodation provided by the borough. With the same object in view a private block has been built for people of means consisting of four wards containing six beds. Each ward is aerially disconnected, so that more than one class of infectious disease can be treated at the same time. The interior furnishing has been carried out in the best possible style consistent with a sick chamber. Dr. Leonard Wilde, the visiting physician, who has superintended the internal arrangements of the buildings, has introduced a novel feature with regard to the clothing of the patients. On admission to hospital each patient is provided with a garment the colour of which indicates the nature of the disease from which he or she may be suffering. For instance, scarlet fever patients are clothed in pink or red, diphtheria patients in blue, and enteric fever patients in yellow. By this means the variously infected garments are readily distinguished for cleansing purposes, and as a day is set apart for each colour to be washed there is no danger of one set of garments becoming infected with the germs that may be contained in another set. The additional precaution of disinfecting the clothes before entering the washhouse is, of course, taken. Another desirable feature of the new hospital, which has been carried out by Dr. Wilde, is the bacteriological research laboratory. Besides the use which can be made of this department should a doubtful case present itself at the hospital, it is at the disposal of any medical practitioner who may wish to assure himself of the exact nature of a case coming under his notice. On application a culture outfit is forwarded to the medical man, who makes the culture and returns the tube in its case, and within twenty-four hours he receives a report from the hospital.

THE LATE DR. CHARLES RUMNEY ILLINGWORTH.

SOME of the friends of the late Dr. C. R. Illingworth have started a fund on behalf of his widow and children, the first list of subscriptions to which we have much pleasure in subjoining. Dr. Illingworth's early death under distressing circumstances deprived the profession of an ardent votary of the science of medicine, and we confidently recommend the case of his wife and children to the generous consideration of others who did not know him personally, and who will perhaps take our assurance that the money is sadly all wanted, and the case a thoroughly deserving one for benevolence.

FIRST LIST.

	£	s.	d.
Dr. F. Birtwhistle, Barton-on-Humber ...	1	1	0
Mr. J. N. Brown, Ealing	0	10	0
Mr. Edgar Duke, St. Leonards-on-Sea	1	1	0
Dr. Dundas Grant, London	5	5	0
Dr. W. E. Humble	0	10	6
Dr. A. Kershaw, Farmouth	1	0	0
Dr. George Kirkwood, Peterborough	5	0	0
Mr. F. Mansy, Tunbridge Wells...	1	1	0
Dr. E. J. Maclean, London	1	1	0
Dr. Peter McBride, Edinburgh	1	1	0
Dr. Thomas Milne, Aberdeen	2	2	0
Dr. J. Inglis Parsons, Mayisir	1	0	0
Mr. Frank Pearce, Brighton	1	1	0
Dr. Geo. W. Potter, London	5	5	0
Mr. W. A. Satchell, Ealing	1	1	0
Mr. J. Silverwood, Elton, Bury	1	1	0
Mr. J. A. Erskine Stuart, Batley	0	10	6
Dr. J. W. Walker, Peterborough	5	5	0
Mr. Griffith Wilkin, London	1	1	0
Dr. G. Sims Woodhead ...	3	3	0
"A. B."	2	2	0
A. B.	3	3	0
F. F., London	0	10	6

HEALTH EFFICIENCY OF THE ENGLISH, FRENCH, ITALIAN, AND RUSSIAN ARMIES.

AT this moment, when the nation is called upon to make great sacrifices so as to increase our means of defence, all that concerns the efficiency of the army and navy is of more than usual importance and interest. It need scarcely be said that it does not suffice to enroll soldiers and sailors, but care must be taken to preserve them in sound bodily strength and health. In respect to general sanitation we may justly claim that the care taken of the health of the army and navy of Great Britain will compare favourably with the best organised

forces of any foreign country. In one important phase of the question, however, we stand at a great disadvantage. The fighting efficiency of our land and sea forces is very considerably impaired by the prevalence of venereal disease among officers and men. Dr. O. Commenge, in a work recently published in Paris entitled "Les Maladies Vénériennes dans les Armées Anglaise, Française, et Russe," points this out in a very conclusive manner. Dr. Commenge states that the proportion of soldiers who during the four years 1889 to 1892 suffered from venereal disease in what he describes as the English army of the metropolis amounted to 217·1, 212·4, 197·4, and 201·2 per 1000. Thus it may be said in round numbers that one-fifth of the troops of the British army are incapacitated for service during the course of the year and this solely through contracting some form of venereal disease. Judging from our own investigations at Aldershot and elsewhere we may conclude that the case is not overdrawn. The figures vary somewhat, but, roughly speaking, a fifth is certainly no exaggeration, for at Aldershot we found that the proportion of soldiers suffering from venereal disease during the year was equal to a quarter of the entire force. The importance of these calculations will at once be understood when compared with similar figures given for the French and Russian armies. For France we find that during the four years in question the prevalence of venereal disease in the army was equal to 45·8, 43·8, 43·7, and 40·0 per 1000 soldiers. For Russia the figures are 40·7, 43·0, 41·5, and 44·6 per 1000 soldiers. Thus it will be seen that venereal disease is four or five times more prevalent in the English than in the French or Russian armies. For one French or Russian soldier who is incapacitated from service because he is suffering from venereal disease there are four or five English soldiers similarly incapacitated. Putting every other consideration aside surely, as a mere matter of military defence, this is an evil that should not be neglected.

In dealing with the Contagious Diseases Act it has been shown that there is not to-day more venereal disease prevalent in the British Army than there was previously to the abolition of the Act, and there are figures that seem to confirm this theory. But we have, in answer, pointed out that the tone of the army has greatly improved, that a higher class of men now serve in the ranks, that great cleanliness is observed by both the men and the women, and that there is a more general use of antiseptics and a more widespread knowledge of the precautions that can be taken. All this has contributed to prevent matters being worse than they are, but surely they are bad enough. The argument that the Contagious Diseases Acts were of no use because the statistics of to-day show no very marked increase in the prevalence of venereal diseases as compared with what existed many years ago when the Act was in force loses all its significance when we put the British army by the side of the armies of France and Russia. In those countries the Contagious Diseases Act, or its equivalent, is in full operation, and we see by the figures given the enormous advantage that has resulted. But, just as we argue that matters would be even worse than they actually are in England had not the general tone and education of the army improved of late years, so it may be urged that the general tone of the continental armies is much superior to that of the English army. It may be maintained, with some semblance of reason, that if there is so little venereal disease in the French army it is because everybody must be a soldier and serve in the ranks; therefore, the whole social tone of the army is much higher, since men of elevated rank and the best education are to be found serving as common soldiers. Apart from the very doubtful question as to whether men of high rank are much more moral than men of low rank, these arguments as to the high social tone of the French rank-and-file certainly do not apply to the Russian rank-and-file, and we find that if there is any difference there is even less venereal disease in the Russian than in the French army. If we take an average of the four years mentioned above the prevalence of venereal disease among the English troops amounted to 207 per 1000 per annum, among the French soldiers to 44·3 per 1000, and among the Russians to 42·4 per 1000. Thus it cannot be said that it is the high social tone of the French army that reduces the proportion of venereal disease, for we have still less venereal disease among the unlettered peasants who in the main constitute the Russian army.

But to those persons who, by all manner of ingenious and roundabout arguments, try to prove that the Contagious Diseases Acts can do no good we may oppose the still more significative experience acquired in the Italian army. There the law which enforced the medical examination of women was abrogated. The prevalence of venereal disease in the Italian army was about the same as in the French and Russian armies. It varied from 4 to 5 per cent. per annum. No sooner was the law abolished than the prevalence increased and in a short time 10 per cent. of the troops contracted venereal disease in the course of a year. After three years of trial the Italian Government reversed its former decision and the law regulating prostitution was re-established. This is far more conclusive than any argument that can be derived from the experience acquired in England. As the English law was only enforced in a few towns it was very defective in its operation, and it is not surprising if its abolition failed to produce any very marked change. In Italy, as in all other continental countries, the law did not apply merely to garrison towns but to the entire country. It, therefore, did produce very great and beneficent results, as is shown by the fact that the prevalence of venereal disease was simply doubled when the law was abolished, and that after only three years of experience the Government and the country were glad to return to the old and successful methods of dealing with this dread disease. As for England, we have argued the question so often and from so many points of view that we do not propose to again travel over the well-worn ground on this occasion. We are simply anxious, at a moment when the public mind is preoccupied with the question of military armaments, to point out that one of the most practical means of increasing the fighting strength of both army and navy would be to protect our soldiers and sailors from venereal disease in the same manner as the armies and navies of continental countries are protected.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held on the 10th inst. at 25, Grosvenor-street, W., Mr. George Pollock, President, being in the chair. The minutes of the last meeting were read and confirmed.

Mr. H. Percy Dunn, the honorary secretary, reported that he had received a letter from Mr. Victor Horsley in reply to the invitation of the committee that he should come forward in the interests of the Association as a candidate for a seat on the Council of the College at the forthcoming election. Mr. Victor Horsley replied in effect that the very nature of the request made it difficult for him to refuse, but he was so deeply committed to the furtherance and establishment of the principles of medical defence that he could not venture to accept fresh and what would unquestionably be grave responsibilities, and he hoped that the committee would accept his very grateful thanks for their confidence and kindness, understanding that it was only other professional work which rendered him unable to serve, as he should greatly like to do, the objects of the Association. Mr. Percy Dunn further reported that in accordance with the instructions of the committee he had communicated with the provincial Fellow whose name had been brought forward as a possible candidate to represent the Association at the College election and that a reply had been received from him to the effect that he would be willing to come forward if nominated by the Association.

At this stage a member of the committee mentioned that he had just heard that the President of the Association, Mr. George Pollock, had intimated to Mr. Holmes that if it were the desire of the committee that he should stand he would willingly do so.

On the motion of Dr. Robert Barnes and Mr. Gant it was unanimously agreed that the offer of Mr. Pollock should be accepted, and as it was felt to be undesirable to bring forward another candidate Mr. Percy Dunn was asked to communicate with the provincial Fellow above referred to upon this subject.

It was reported to the committee that Mr. Clement Lucas of Guy's Hospital was a candidate for the Council, and that in reply to certain questions addressed to him by Mr. Norton he had expressed views almost entirely in unison with those

advocated by the Association. The hope was therefore expressed that Mr. Clement Lucas would be successful in securing one of the vacant seats; especially as with the exception of Mr. Pollock he was the only candidate who was known to have stated his intention to support a reforming policy including the resolution passed in favour of giving direct representation to the Members of the College by so large a majority of the Fellows at the last half-yearly meeting of Fellows held in January. It was decided to send a circular to the members of the Association in reference to the approaching elections.

A notice of motion which Mr. Holmes intended to send to the secretary of the College for the meeting of the Fellows in July was read. The terms of the motion are the following: "That the Council be requested to instruct its representative on the General Medical Council to forward in every way which seems feasible the objects of the Civil Rights Defence Committee in the case of Mr. R. B. Anderson."

A resolution was passed instructing the honorary secretary to ask Mr. Victor Horsley to second the motion of Mr. Holmes, and if he was unable to do so to secure the services of Mr. George Jackson of Plymouth for that purpose.

It was decided to hold another meeting of the committee before the election on July 2nd, and there being no other business the committee adjourned.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

On the Pollution of the River Dee and its Tributaries, by Dr. BRUCE LOW.[1]—This is one of the most comprehensive reports which have been issued by the Medical Department of the Local Government Board on the question of river pollution, and it has the more interest and importance because the Dee forms in its lower reaches the water-supply for the city of Chester and because a Bill is now before Parliament for the erection of a dam across the river below Chester which, it is contended, will go materially to diminish the pollution to which the river is alleged to be subjected at the point of the water intake. For the moment, however, it will be convenient to refer to the pollutions that take place above the water intake. The Dee has its origin in the overflow waters of Bala Lake, and, receiving a number of tributaries, it flows on for some ninety miles to the sea. In this course it touches on five separate counties and with its affluents comes into relation with no less than twenty-one sanitary districts within the watershed of the river. A description of these numerous districts is given by Dr. Low in especial relation with their influence on the water of the Dee, and the detailed attention given to this subject may be judged of when it is stated that the report covers no less than forty-five folio pages of printed matter, together with plates and illustrations. Anything more disturbing to the consumers of the Dee water can hardly be conceived, for the sewage and other filth, including manufacturing refuse, of nearly the entire area find their way untreated into the main river or its branches. Llangollen is a gross offender, and photographic plates are inserted in the report to show how sewer outfalls, watercloset soil-pipes, privies, &c., all open out directly into the bed of the river, the filth to be washed down in the direction of Chester at the next flush. Summarising his description of Llangollen Dr. Low says: "In a word, the liquid and solid excrement of nearly the entire population of Llangollen goes at once to the Dee"; and he recalls the fact that though the normal population of the place may not exceed 3000 it must be some 5000 at least when in the summer months the lodging-houses and the hotels are full of visitors. Indeed, the story which Dr. Low sets out from the beginnings of the streams until within a comparatively small distance of the point where the intake of the Chester Waterworks Company is placed is, as he pithily and forcibly puts it, an "almost endless catalogue of contaminations of the Dee and its affluents by the excrement of men and animals, by trade processes, and by other impurities." And he adds that amongst the principal offenders against the law in this matter are many authorities who are entrusted by the Legislature with the maintenance of public health. But this is not all. Chester itself grossly pollutes the river by its sewage effluent and otherwise below the city and the water intakes, some of the stuff being spoken of as a torrent of foul sewage, black as ink, suddenly forced into and blackening the river nearly half-way across. And the position of these pollutions below the point of intake unfortunately affords no safety, for at spring tides the water running in at the mouth of the river overtops the Dee weir from one to six feet, carrying with it filth, dead dogs, &c., and the tidal influence is felt as far as twelve miles above Chester. Some have contended that owing to the flow of fresh water from above—i.e., the water polluted as we have described—no returning filth can get up to the intakes; but a great effort is now being made to get Parliamentary powers to prevent this very pollution from below by the erection of another weir. It is to be hoped this action indicates that the authorities are now more alive to the necessities of the case than they were in 1892, when, on Dr. Ballard's report, a committee of the corporation decided that the water was of a "high standard of excellence," and yet in the same breath urged that power should be procured to stay the pollutions. But no stoppage of filth from below will get rid of the almost endless catalogue of pollutions from above, and no trust should be placed on mere filtration when the source of the supply is fouled with such a bulk of excremental and other filth as is here in question.

On the Sanitary Circumstances and Administration of Cowbridge, by Dr. BRUCE LOW.—This inquiry was instituted on a complaint by the Glamorganshire County Council to the effect that the corporation had not properly enforced the provisions of the Public Health Act. Cowbridge is little more than a village, but unhappily it is a separate entity for public health purposes by reason of its being a borough. The population at the last census was only 1377, occupying 263 houses, and it was more than usually populous at the time owing to an influx of railway navvies. The public water-supply is from six sources. One seems good and wholesome, a second may be so, but the four others vary from being derived from wells sunk close to cesspits or burial grounds down to supplies that are actually offensive to the nose and to taste. Private wells hardly differ from the public ones as to risk of pollution. With respect to sewerage Dr. Low reports that there is no proper system, that the town ditch receives the contents of highway drains which have been turned into sewers, and that cesspools soak into the surrounding soil, which is thereby greatly polluted. Privies and cesspits with overflows add to the mischief; or, where near the river bank, empty directly into the stream. A few earth-closets, however, have been provided. There is no public scavenging and some gross accumulations of refuse result. The slaughter-houses and most of the common lodging-houses are unsatisfactory, and by-laws are in some respects not enforced. House accommodation is in many respects bad, and formerly it was reported that much of the "wretched house property" belonged directly or indirectly to town councillors, a statement now quoted by Dr. Low. Money has been spent in the little town, but it has not been devoted to its most pressing needs; indeed, after discussing the administration and past history of the place in connexion with the present faulty conditions Dr. Low arrives definitely at the conclusion that the contention of the county council has been made out, and that the town council have been especially neglectful in not providing a proper water-supply and sewerage for their district. No other conclusion was possible; indeed, the difficulty is rather to detect what sanitary functions have been carried out by this authority.

[1] Eyre and Spottiswoode, East Harding-street, E.C.; John Menzies and Co., Edinburgh and Glasgow; Hodges, Figgis, and Co., Limited, Dublin. 1896. Price 2s. 3d.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6571 births and 3473 deaths were registered during the week ending June 13th. The annual rate of mortality in these towns, which had been 17·6 and 17·8 per 1000 in the two preceding weeks, declined again last week to 16·7. In London the rate was 16·5 per 1000, while it averaged 16·9 in the thirty-two provincial towns. The lowest rates in these towns were

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON—MAY, 1896.

(Specially compiled for THE LANCET.)

SANITARY AREAS.	Estimated population in the middle of 1896.	NOTIFIED CASES OF INFECTIOUS DISEASE.										DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.										Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.†	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,425,955	12	1558	949	—	157	9	16	421	—	3122	9·2	—	464	58	179	354	—	24	—	42	1121	3·3	5837	17·2	132
West Districts.																										
Paddington	123,942	—	34	28	—	2	—	—	10	—	74	7·8	—	17	—	6	3	—	1	—	2	23	2·9	131	14·1	101
Kensington	167,993	2	53	17	—	4	—	1	14	—	91	7·1	—	37	2	5	15	—	1	—	2	62	4·8	237	18·4	186
Hammersmith	111,246	—	37	11	—	4	—	—	7	—	59	6·9	—	8	—	4	1	—	1	—	—	14	1·6	117	13·7	104
Fulham	124,029	—	46	28	—	2	1	1	5	—	83	8·7	—	9	1	4	5	—	—	—	1	20	2·1	135	14·2	140
Chelsea	100,815	—	37	30	—	2	—	—	11	—	80	10·3	—	22	1	6	10	—	—	—	—	39	5·0	146	18·9	152
St. George Hanover-square	73,054	—	21	9	—	1	—	—	7	—	38	6·8	—	2	1	1	3	—	—	—	1	7	1·2	63	11·2	80
Westminster	53,595	—	19	3	—	1	—	—	2	—	25	6·1	—	1	2	—	1	—	2	—	1	7	1·7	71	17·3	160
St. James Westminster	22,735	—	6	3	—	—	—	—	1	—	10	5·7	—	—	1	—	—	—	—	—	1	2	1·1	25	14·3	200
North Districts.																										
Marylebone	136,239	—	67	20	—	9	—	—	13	—	109	10·4	—	9	—	7	11	—	1	—	2	30	2·9	213	20·4	129
Hampstead	79,831	—	15	12	—	6	—	—	5	—	38	6·2	—	3	—	2	3	—	—	—	—	8	1·3	58	9·5	85
St. Pancras	234,347	1	53	41	—	2	—	—	26	—	123	6·9	—	10	3	6	11	—	—	—	2	32	1·8	313	17·5	145
Islington	340,007	2	143	100	—	16	—	5	26	—	282	11·2	—	20	5	30	26	—	2	—	3	86	3·3	464	15·5	115
Stoke Newington	36,329	—	11	10	—	2	—	—	6	—	29	10·4	—	2	1	2	6	—	1	—	—	12	4·3	42	16·1	66
Hackney	219,834	1	95	29	—	7	—	—	26	—	158	9·4	—	12	1	6	17	—	—	—	5	41	2·4	233	13·8	113
Central Districts.																										
St. Giles	37,170	—	12	10	—	2	—	—	4	—	28	9·8	—	10	—	—	3	—	—	—	—	13	4·6	51	17·9	181
St. Martin-in-the-Fields	13,294	—	4	3	—	—	—	—	—	—	7	6·9	—	6	—	2	—	—	—	—	1	9	8·8	25	24·5	333
Strand	22,108	—	7	2	—	—	—	—	1	—	10	5·9	—	9	—	1	1	—	—	—	—	11	6·5	47	27·8	306
Holborn	31,940	—	8	5	—	2	1	—	8	—	24	9·8	—	2	—	1	4	—	—	—	—	7	2·9	53	21·6	125
Clerkenwell	64,762	1	16	20	—	7	—	—	7	—	51	10·3	—	4	—	1	4	—	1	—	1	11	2·2	93	18·7	132
St. Luke	40,362	—	13	12	—	3	—	—	12	—	40	12·9	—	5	—	—	1	—	1	—	—	8	2·6	72	23·3	134
City of London	32,845	—	16	6	—	—	—	—	2	—	24	9·5	—	2	—	—	1	—	—	—	—	3	1·2	47	18·7	194
East Districts.																										
Shoreditch	122,678	—	28	14	—	6	1	—	19	—	68	7·2	—	15	2	3	11	—	1	—	1	37	3·5	178	18·9	142
Bethnal Green	130,282	2	85	36	—	8	1	—	26	—	156	15·6	—	14	4	8	21	—	2	—	1	50	5·0	194	19·4	107
Whitechapel	76,143	—	27	23	—	1	—	—	13	—	64	11·0	—	5	1	2	6	—	1	—	—	14	2·4	108	18·5	95
St. George-in-the-East	45,095	—	35	15	—	3	—	—	3	—	56	16·2	—	1	—	1	3	—	—	—	—	6	1·7	77	22·3	133
Limehouse	56,770	1	22	24	—	—	—	1	2	—	50	11·5	—	3	2	5	6	—	—	—	—	16	3·7	95	21·8	152
Mile End Old Town	108,645	—	40	38	—	4	—	1	10	—	93	11·2	—	12	2	6	6	—	—	—	1	26	3·1	129	15·5	94
Poplar	172,319	—	63	54	—	10	1	2	26	—	156	11·8	—	18	1	7	17	—	—	—	1	44	3·3	282	19·1	136
South Districts.																										
St. Saviour Southwark	26,429	—	4	3	—	—	—	—	1	—	8	3·9	—	—	—	2	2	—	—	—	—	4	2·0	50	24·7	105
St. George Southwark	60,276	—	11	15	—	2	—	—	3	—	31	6·7	—	8	1	2	4	—	—	—	1	16	3·5	95	20·5	148
Newington	120,211	—	34	15	—	8	—	1	11	—	69	7·5	—	9	3	4	11	—	1	—	1	29	3·1	178	19·3	165
St. Olave Southwark	13,147	—	9	1	—	—	—	—	2	—	12	11·9	—	1	—	1	1	—	—	—	—	2	2·0	17	16·8	198
Bermondsey	83,669	—	33	12	—	9	—	—	4	—	58	9·0	—	6	1	4	10	—	1	—	2	24	3·7	135	21·0	150
Rotherhithe	41,064	—	10	5	—	2	—	—	7	—	24	7·6	—	1	—	—	5	—	1	—	1	8	2·5	60	19·0	133
Lambeth	287,211	—	92	31	—	7	1	2	20	—	153	6·9	—	16	5	7	17	—	2	—	3	50	2·3	363	16·5	110
Battersea	168,825	—	68	32	—	3	—	—	10	—	113	8·7	—	46	2	7	28	—	—	—	1	84	6·5	229	19·6	166
Wandsworth	191,922	—	60	16	—	7	1	—	20	—	104	7·1	—	24	5	7	25	—	1	—	1	68	4·6	229	15·6	158
Camberwell	256,672	1	76	88	—	6	—	—	16	—	187	9·5	—	10	4	17	23	—	1	—	2	57	2·9	234	17·2	132
Greenwich	177,266	—	67	71	—	4	1	—	22	—	165	12·1	—	22	3	8	19	—	1	—	2	55	4·0	234	17·2	132
Lewisham (excluding Penge)	84,995	—	25	29	—	3	—	1	3	—	61	9·4	—	10	1	3	1	—	1	—	2	18	2·8	104	16·0	110
Woolwich	43,272	1	5	6	—	1	—	—	3	—	16	4·8	—	21	—	—	5	—	—	—	1	27	8·1	82	24·7	207
Lee	39,504	—	11	8	—	—	—	1	3	—	23	7·6	—	2	1	1	3	—	—	—	—	7	2·3	37	12·2	123
Plumstead	64,203	—	39	14	—	3	1	—	4	—	61	12·4	—	20	2	5	4	—	1	—	1	33	6·7	96	19·5	179
Port of London	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—

* Including 43 cases of membranous croup.

† Including deaths from membranous croup.

9·1 in Norwich, 11·3 in Derby, 12·1 in Plymouth, and 12·6 in Leicester; the highest rates were 20·4 in Oldham, 21·2 in Sunderland, 21·7 in Bolton, and 24·3 in Manchester. The 3473 deaths included 541 which were referred to the principal zymotic diseases, against 540 and 559 in the two preceding weeks; of these, 221 resulted from measles, 117 from whooping-cough, 69 from diphtheria, 65 from diarrhœa, 39 from scarlet fever, and 30 from "fever" (principally enteric). No fatal case of any of these diseases was recorded in Swansea; in the other towns they caused the lowest death-rates in Huddersfield, Bradford, Brighton, and Birmingham; and the highest rates in Salford, Halifax, Burnley, Manchester, and Hull. The greatest mortality from measles occurred in Croydon, Bristol, Manchester, Hull, and Gateshead; from whooping-cough in Cardiff, Burnley, Salford, Hull, and Halifax; from "fever" in Wolverhampton; and from diarrhœa in Leicester. The mortality from scarlet fever showed no marked excess in any of the large towns. The 69 deaths from diphtheria included 49 in London, 5 in Birmingham, 2 in Liverpool, and 2 in Leicester. No fatal case of small-pox was registered in any of the thirty-three large towns. There were 27 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 13th inst., against 22, 19, and 25 at the end of the three preceding weeks; 9 new cases were admitted during the week, against 5, 3, and 8 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2781, against numbers increasing from 2523 to 2717 on the six preceding Saturdays; 352 new cases were admitted during the week, against 305, 297, and 318 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 230 and 213 in the two preceding weeks, further declined to 183 last week, and were 53 below the corrected average. The causes of 55, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Oldham, Blackburn, Newcastle-upon-Tyne, and in ten other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Sheffield, and Hull.

HEALTH OF SCOTCH TOWNS

The annual rate of mortality in the eight Scotch towns, which had been 19·2 per 1000 in each of the three preceding weeks, declined again to 18·5 during the week ending June 13th, but exceeded by 1·8 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·0 in Perth and 14·7 in Edinburgh to 18·4 in Aberdeen and 21·2 in Glasgow. The 539 deaths in these towns included 23 which were referred to whooping-cough, 21 to measles, 16 to diarrhœa, 4 to scarlet fever, 4 to "fever," and 1 to diphtheria. In all, 69 deaths resulted from these principal zymotic diseases, against 83 and 81 in the two preceding weeks. These 69 deaths were equal to an annual rate of 2·4 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had declined from 38 to 26 in the four preceding weeks, further fell to 23 last week, of which 17 occurred in Glasgow and 4 in Paisley. The deaths from measles, which had been 20 and 25 in the two preceding weeks, declined again to 21 last week, and included 20 in Glasgow. The 4 deaths referred to different forms of "fever," corresponded with the number in the preceding week, and were all recorded in Glasgow. The fatal cases of scarlet fever, which had increased from 3 to 8 in the four preceding weeks, declined to 4 last week, and included 2 in Glasgow. The deaths from diseases of the respiratory organs in these towns, which had been 97 and 93 in the two preceding weeks, further declined to 82 last week, and were slightly below the number in the corresponding week of last year. The causes of 32,or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 23·9 and 19·8 per 1000 in the two preceding weeks, rose again to 23·7 during the week ending June 13th. During the past eleven weeks of the current quarter the death-rate in the city has averaged 23·1 per 1000, the rate during the same period being 18·1 in London and 16·9 in Edinburgh. The 159 deaths registered in Dublin showed an increase of 26 upon the number in the preceding week, and included 10 which were referred to the principal zymotic diseases, against 9 and 8 in the two preceding weeks; of these, 4 resulted from whooping-cough, 3 from scarlet fever, 2 from "fever," 1 from diarrhœa, and not one either from small-pox, measles, or diphtheria. These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 3·1 in London and 0·9 in Edinburgh. The 4 fatal cases of whooping-cough exceeded the number recorded in any week during the current year. The 3 deaths from scarlet fever showed a further increase upon recent weekly numbers, while the mortality from diarrhœa showed a decline. The deaths referred to different forms of "fever," which had been 5 and 3 in the two preceding weeks, further fell to 2 last week. The 159 deaths in Dublin last week included 31 of infants under one year of age, and 36 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Two inquest cases and 2 deaths from violence were registered; and 54, or more than a third, of the deaths occurred in public institutions. The causes of 7, or more than 4 per cent., of the deaths in the city last week were not certified.

VITAL STATISTICS OF LONDON DURING MAY, 1896.

In the accompanying table will be found summarised complete statistics relating to sickness and mortality during May in each of the forty-three sanitary areas of London. With regard to the notified cases of infectious disease in the metropolis during last month, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to 9·2 per1000 of the estimated population. In the three preceding months the rates had been 8·8, 8·4, and 7·5 per 1000 respectively. Among the various sanitary areas the rates were considerably below the average in Westminster, St. James Westminster, Hampstead, Strand, St. Saviour Southwark, St. George Southwark, and Woolwich; while they showed the largest excess in St. Luke, Bethnal Green, St. George-in-the-East, Poplar, St. Olave Southwark, Greenwich, and Plumstead. The prevalence of small-pox in London during May showed a further decline from that recorded in recent months, only 12 cases being notified, including 2 in Kensington, 2 in Islington, and 2 in Bethnal Green sanitary areas. The Metropolitan Asylum Hospitals contained 15 small-pox patients at the end of May, against 45, 33, and 10 at the end of the three preceding months; the weekly admissions averaged 4, against 6, 7, and 4 in the three preceding months. The prevalence of scarlet fever in London showed a marked increase during May; this disease was proportionally most prevalent in Marylebone, Hackney, City of London, Bethnal Green, St. George-in-the-East, Limehouse, Battersea, and Plumstead sanitary areas. The Metropolitan Asylum Hospitals contained 2614 scarlet fever patients at the end of May, against 2867, 2688, and 2464 at the end of the three preceding months; the weekly admissions averaged 273, against 258, 234, and 208 in the three preceding months. The prevalence of diphtheria in London during May showed an increase upon that recorded in the preceding month; among the various sanitary areas this disease showed the highest proportional prevalence in Clerkenwell, Whitechapel, St. George-in-the-East, Limehouse, Mile End Old Town,, Poplar, Camberwell, Greenwich, and Lewisham. There were 703 diphtheria patients under treatment in the Metropolitan Asylum Hospitals at the end of May, against 715, 704, and 713 at the end the three preceding months; the weekly admissions averaged 95, against 99 and 89 in the two preceding months. The prevalence of enteric fever in London showed a slight decline from that recorded in the preceding month; this disease was proportionally most prevalent in Hampstead, Clerkenwell, Newington, and Bermondsey sanitary areas. Erysipelas was proportionally most prevalent in Holborn, St. Luke, Bethnal Green, Whitechapel, and Poplar sanitary areas. The 16 cases of puerperal fever notified during May included 5 in Islington, 2 in Poplar, and 2 in Lambeth sanitary areas.

† Including deaths from membranous croup.

* Including 43 cases of membranous croup.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various sanitary areas, the deaths occurring in the institutions of London having been distributed among the different sanitary areas in which the patients had previously resided. During the four weeks ending Saturday, May 30th, the deaths of 5837 persons belonging to London were registered, equal to an annual rate of 17·2 per 1000, against 20·0, 19·4, and 18·7 in the three preceding months. The lowest death-rates during May in the various sanitary areas were 9·5 in Hampstead, 11·2 in St. George Hanover-square, 12·2 in Lee, 13·7 in Hammersmith, 14·1 in Paddington, 14·2 in Fulham, and 14·3 in St. James Westminster; the highest rates were 21·6 in Holborn, 21·8 in Limehouse, 22·3 in St. George-in-the-East, 23·3 in St. Luke, 24·5 in St. Martin-in-the-Fields, 24·7 in St. Saviour Southwark and in Woolwich, and 27·8 in Strand. During the four weeks of May 1121 deaths were referred to the principal zymotic diseases in London; of these, 464 resulted from measles, 354 from whooping-cough, 179 from diphtheria, 58 from scarlet fever, 42 from diarrhœa, 24 from enteric fever, and not one from small-pox. These 1121 deaths were equal to an annual rate of 3·3 per 1000; among the various sanitary areas the lowest death-rates from these diseases were recorded in Hammersmith, St. George Hanover-square, St. James Westminster, Hampstead, and City of London, and the highest rates in Chelsea, St. Martin-in-the-Fields, Strand, Bethnal Green, Battersea, Woolwich, and Plumstead. The 464 deaths referred to measles were 176 above the corrected average number in the corresponding periods of the ten preceding years; among the various sanitary areas this disease showed the highest proportional fatality in Kensington, Chelsea, St. Giles, St. Martin-in-the-Fields, Strand, Battersea, Woolwich, and Plumstead. The 58 fatal cases of scarlet fever were within 4 of the corrected average number; the mortality from this disease showed no marked excess in any of the sanitary areas. The 179 deaths from diphtheria were 56 above the corrected average number; among the various sanitary areas this disease was proportionally most fatal in Chelsea, Marylebone, St. Martin-in-the-Felds, Bethnal Green, Limehouse, Mile End Old Town, Camberwell, Greenwich, and Plumstead. The 354 fatal cases of whooping-cough were as many as 126 above the corrected average number; this disease showed the highest proportional fatality in Stoke Newington, Holborn, Bethnal Green, Limehouse, Bermondsey, Rotherhithe, Battersea, and Wandsworth sanitary areas. The 24 deaths referred to enteric fever were 11 below the corrected average number; there was no marked excess of enteric fever mortality in any of the sanitary areas. The 42 fatal cases of diarrhœa were 17 below the corrected average number. In conclusion, it may be stated that the mortality in London during May from these principal zymotic diseases were nearly 40 per cent. above the average.

Infant mortality in London during May, measured by the proportion of deaths under one year of age to births registered, was equal to 132 per 1000. Among the various sanitary areas the lowest rates of infant mortality were recorded in Paddington, St. George Hanover-square, Hampstead, Stoke Newington, Whitechapel, and Mile End Old Town; and the highest rates in Kensington, St. James Westminster, St. Giles, St. Martin-in-the-Fields, Strand, City of London, and Woolwich.

THE SERVICES.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant John Herbert Whitehead resigns his commission.

INDIA AND THE INDIAN MEDICAL SERVICES.

Brigade-Surgeon-Lieutenant-Colonel G. Hutcheson, M.D., re-appointed to be Sanitary Commissioner, North-Western Provinces and Oudh. The following promotions are made in the Madras Medical Establishment:—Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels: W. E. Johnson, M.D., vice Brigade-Surgeon-Lieutenant-Colonel T. J. McGann, promoted; G. F. Bevan, vice Brigade-Surgeon-Lieutenant-Colonel A. L. Hackett, who has retired; A. F. Dobson, M.B., vice Brigade-Surgeon-Lieutenant-Colonel P. R. Martin, who has retired; C. Little, M.D., vice Brigade-Surgeon-Lieutenant-Colonel J. F. Sargent, deceased; A. N. Rogers Harrison, vice Brigade-Surgeon-Lieutenant-Colonel W. Price, M.D., who has retired.

NAVAL MEDICAL SERVICE.

Deputy Inspector-General of Hospitals and Fleets Alexander Turnbull, M.D., has been promoted to the rank of Inspector-General of Hospitals and Fleets in Her Majesty's Fleet. Fleet-Surgeon Richard William Coppinger, M.D., has been promoted to the rank of Deputy Inspector-General of Hospitals and Fleets in Her Majesty's Fleet. The following appointments are announced. Deputy Inspectors-General of Hospitals and Fleets: H. Macdonnell to Chatham Hospital; R. W. Coppinger to Haslar Hospital; J. H. Martin, D.S.O., to Malta Hospital. Fleet-Surgeon T. D. Gimlette to Haslar Hospital. Staff-Surgeon S. W. Vasey to the *Caledonia*.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain Josiah Telfer Thomas, 1st Volunteer Battalion the Duke of Cornwall's Light Infantry, to be Surgeon-Captain.

VOLUNTEER CORPS.

Rifle: 3rd Volunteer Battalion the Northumberland Fusiliers: William George Richardson, M.B., to be Surgeon-Lieutenant. 2nd (Prince of Wales's) Volunteer Battalion the Devonshire Regiment: John Harley Gough, gent., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Leicestershire Regiment: William Pemberton Peake, gent., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Royal Welsh Fusiliers: John Edward Henry Davies, gent., to be Surgeon-Lieutenant. 5th Volunteer Battalion the Cameronians (Scottish Rifles): Surgeon-Captain H. Arthur, M.D., to be Surgeon-Major. 1st Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment): Lieutenant R. H. Luce, M.B., from the 2nd Volunteer Battalion the Wiltshire Regiment, to be Surgeon-Lieutenant.

DEATHS IN THE SERVICES.

Fleet-Surgeon William Gordon James Ayre, R.N. (retired), at Cheltenham on the 9th inst., in his seventieth year. He was appointed a Surgeon in the Navy in 1851, and was Assistant-surgeon of the *Penelope* on the West Coast of Africa. He served in the *Recruit* during the Russian War in the Black Sea, 1855, and was present at the expedition to Keitch and the operations in the Sea of Azov (Crimean and Turkish medals and clasp for Azov).

VOLUNTEER MEDICAL ASSOCIATION AMBULANCE CHALLENGE SHIELD.

The sub-committee appointed by the council of the association have decided that the annual competition for the shield shall take place on Saturday, July 18th. The competition will be held at Wellington Barracks, by kind permission of the officer commanding, and squads intending to compete must be on the ground at four o'clock. The annual mess dinner of the Volunteer medical officers will take place at Limmer's Hotel at 7.30 on the same evening. Further particulars can be obtained on application to the honorary secretaries, 20, Hanover-square, London, W.

THE SOUDAN CAMPAIGN.

There is reason to believe that the highly successful attacks that have been recently made upon the Dervishes and the capture of Firket, followed by the taking of Suarda, will have far-reaching results. The Anglo-Egyptian force continues to enjoy good health. At Wady Halfa the sick recently numbered only 5·6 per cent. The hospitals are working very satisfactorily. The wounded and the prisoners captured from the Dervish force are well cared for.

JAPANESE LOSSES IN FORMOSA.

The following statistics, published in several Japanese newspapers, are apparently derived from official sources:—From May 26th to Nov. 15th, 1895, the average strength of the Japanese Army of occupation in Formosa was 95,000 of all ranks; killed in action, or died from wounds during the period, 195; died from disease in the various hospitals, 4447; invalided, 21,748; remaining under treatment, 5246; discharged to duty, 7162.

THE GARRISON IN EGYPT.

We are very glad to learn that the British troops in Egypt have not suffered from the cholera epidemic that has recently prevailed in Alexandria, Cairo, and other places. One fatal attack occurred in the person of a soldier stationed at the

citadel in Cairo, but no other cases have since arisen among the troops. Their health is stated to be excellent.

Deputy-Surgeon-General G. S. Ryerson, M.D., Canadian Militia, Toronto, who has recently been through a course at the Volunteer Ambulance School of Instruction, obtained a certificate of proficiency at an examination held before a special board of Army medical officers on June 2nd at the Station Hospital, Rochester-row, S.W.

The Rev. Sir Borradaile Savory, Bart., M.A., son of the late Sir William Savory, has accepted the acting chaplaincy to the Volunteer Medical Staff Corps (the London companies).

Surgeon-Lieutenant-Colonel W. Campbell, of the Grenadier Guards, has been again selected for the post of Principal Medical Officer at the Bisley Rifle meeting.

The Hampshire Militia Medical Staff Corps will be encamped at the Royal Victoria Hospital, Netley, from the 3rd to 29th prox.

Correspondence.

"Audi alteram partem."

"ISOLATION AND THE PUBLIC HEALTH ACT."

To the Editors of THE LANCET.

SIRS,—Dr. Benham, in your issue of the 13th inst., calls attention to the important subject of isolation in infectious diseases. No two opinions can exist as to the importance of early diagnosis and the wisdom of removal to an isolation hospital of cases of small-pox and typhus fever; yet in cases of scarlet fever, diphtheria, and enteric fever something may be said against indiscriminate removal. I believe the practice of removal to hospital after the receipt of the notification certificate differs almost in every district according to the opinions held by the medical officer of health or sanitary authority. I know that some medical officers of health believe that every case of infectious disease should be removed to hospital for isolation and treatment, so that I am pleased that Dr. Benham has received a reply from the Local Government Board which leaves one to imply that the consent of the medical attendant should be sought before removal. The Notification Act, 1889, was not passed for the purpose of enabling the sanitary authority to effect removal of *all* cases but to enable the medical officer of health to early become acquainted with outbreaks of epidemic disease. As an old sanitarian and a general practitioner but a young medical officer of health, I agree with many of Dr. Benham's reasons for allowing the treatment of infectious cases such as scarlet fever and diphtheria at home, although I do not believe that patients are longer in recovering when taken to hospital or that they have a better chance of recovery when left at home, and I cannot subscribe to the statement that it is an easy matter to isolate cases of scarlet fever or diphtheria completely in an ordinary dwelling house; but I do believe it can be done sufficiently, and this meets the requirements of the case. I have had as a private practitioner my own little "grievances" in reference to the removal of cases, and now as a medical officer of health have to do my duty and prevent the spread of infectious diseases among the ratepayers. Now unless my fellow practitioners give me a loyal support I cannot hope to do this. A short experience which I will relate I have every reason to be satisfied with, and as my sanitary committee are desirous of keeping down the expenses of the infectious disease hospital from a ratepayer's point of view I must do what I can to encourage my medical brethren to treat as many cases as they can outside, providing sufficient isolation is possible, only removing such cases as they request. When I took office small-pox and typhus fever were rampant, and scarlet fever was prevalent in different parts of the town. I called my *confrères* together and laid down a line of action which I intended to follow—namely, to take into hospital only cases of small-pox and typhus fever, and till these no longer occured other infectious cases would require to be treated at their own homes, and I trusted my *confrères* would assist me, especially in regard to isolation in the patient's own homes. Expressions of opinion were given, and some thought isolation in a cottage impossible, but all agreed to assist me as far as they could. I was willing to see all doubtful cases of typhus fever or small-pox with them and to ensure early removal. One of my sanitary inspectors was given the extra duty of visiting periodically and systematically all houses in which scarlet fever was present in order to see that everything was being carried out as far as could be under the circumstances, and supplying an abundance of disinfectants. In four months I was enabled to report to my committee that small-pox was stamped out and typhus fever had disappeared, scarlet fever being kept within bounds. The only cases of infection spreading was in the same house, just as we have had since even after early removal to hospital, where the other children had been allowed to associate with the patient; but we had some good cases of sufficient isolation in very poor homes and in insanitary houses where the mother nursed the patient in a separate room and carried out all our instructions. Now that I have my scarlet fever block ready for cases I find that mild cases of this disease are difficult of diagnosis, and that it is better to leave the patient under the medical attendant till all doubt disappears rather than expose the child to infection in the hospital, and put the landlord and sanitary authorities to needless expense in stoving and cleansing the house if the previous diagnosis is not confirmed. If all private practitioners were like Dr. Benham and would take the trouble to insist on the "necessary precautions" being taken, they would lighten the hearts and lessen the responsibilities of medical officers of health in preventing the spread of these infectious diseases and would retain their own private cases as well as teach parents and guardians that they have a duty towards those entrusted to their charge. The importance of the subject is my apology for the length of this communication.

I am, Sirs, yours, faithfully,

WM. BERRY, F.R.C.S.Irel., D.P.H.,
Wigan, June 15th, 1896. Medical Officer of Health of Wigan.

POINTS IN THE NEW LONDON UNIVERSITY QUESTION.

To the Editors of THE LANCET.

SIRS,—I crave space to consider the proposed enlargement of the present London University for the reasons that it will affect and revolutionise the position of a large portion of medical practitioners who are merely London diplomates as compared to those holding London degrees. It is an epoch-moving reform, which will or ought to give us all our proper degreed status as Doctor, as in most other countries, to be definitely grasped and respected by the public, and giving all members of the profession an equal chance of soaring in the estimation of their own ranks or attaining the highest positions of merit and importance, which under the present invidious restrictions is a galling impossibility. The common name "diploma" is now the equivalent of many a low distinction obtained by, say, plumbers from the Institute of Hygiene, or given to trade fitters at exhibitions, or even received by the *officiers de santé* in comparison to the higher grade French degrees. This is all apt to rankle, though borne with benign toleration. The adoption of the Lord Cowper Commission's proposals would tend to alter, ameliorate, and heighten our general professional status, and it would at last make the capital of England a university centre, which I venture to say is none too soon, though it is quite English to be behind the times. It would also combine the enormous and especially medical-teaching capacities of this metropolis into a real and complete London University, which would likely achieve for itself a world-wide and hereditary reputation, especially if from the start it should be under munificent and Governmental endowment.

The high principle and faithful devotion of some of our leaders in the just cause of reform of the London University shows, from their very status, that the isolated monopoly of the present class of degree holders will not be encroached upon by the movement, and the quality and facility for passing future brimful examinations without specially practical study is speciously safeguarded and assured to those to whom it appeals. It is to be hoped that now the scheme has actually been brought forward in the House of Commons the noble efforts of our able leaders will not tire or despair of moving all their ingenuities to convince those in Council and of our able Parliament of the necessity of this advance; and if they need any voice or action from members of our London medical colleges it would be not only our interest and advantage, but a high-toned duty on

our part to help with our support. In the comparative study of the European universities I find that they have been chiefly founded in one faculty—e.g., Paris, divinity; Bologna, law, &c.—so on this score it will not be out of the way for medicine to play an absorbing and an important *rôle* in the present proposed reformation.

It is also important to realise that women will be largely admitted if the present scheme be carried through. I have generally heard expressed that woman's late and prominent efforts in the universities were quite a new phase of pretty and probably fleeting activity; but my information now goes to prove that this is not so, and I hope that in this connexion it may be worth recording that in the very first universities ever formed in Europe they were allowed equal entrance with men, and for the immediate period success attended their impulsive energy. In the case of Salerno "Trotula" is a distinguished example, for she wrote (circa A.D. 1059[1]) a treatise on "Medicine and Diseases of Women," introducing as a new feature the work of Latin and Greek writers, for the nonce discarded in the great Salerno medical school in favour of their own particular hygienic methods. In Paris Héloise was an early and a brilliant student of the university which was founded by Abélard to whom she wrote her well-known letters. I also venture to cite below extempore lines written by her (A.D. 1122) on a unique vellum funereal roll about the Abbot of Savigny. Vital, with grief and its futility as the difficult theme. Other great women writers since those lapsed days were debarred from university distinctions, but in all probability in the new university their work, beside that of the men, may be fraught with the most momentous importance and renown to themselves, and prove an honourable distinction to have freely permitted their admission. In conclusion, I would press upon our great leaders the important claims of the diplomates of the London Colleges of Surgeons and Physicians, and trust that the ultimate university authorities will have pointed out to them the justice of the claims of the Members and Licentiates to participate in a retrospective clause, which will entitle them to proceed to the Doctorate degree, either by an original thesis or by a final examination, for clearly the movement for a medical faculty at any rate arose in great part out of their disabilities. In fact, it will hardly be fair if this point be not acceded to, for it will allow similarly trained men to obtain degrees in medicine over and above the former titles.

I am, Sirs, yours faithfully,

Upper Woburn-place, W.C. H. ELLIOT-BLAKE.

(Copied from the original in Paris.)

"Flet pastore pio grex desolatus adempto,
Soletur miseras turba fidelis oves.
Proh dolor! hunc morsu sublatum mortis edaci.
Non dolor aut gemitus vivicare queunt.
Ergo quid lacrime, quid tot tantique dolores
Prosunt? Nil prodest hic dolor imo nocet.
Sed licet utilitas ex fletu nulla sequatur,
Est tamen humanum morte doloris patris.
Est etiam gaudere pium; si vis rationis
Tristicie vires ad nichilare queat.
Mors etenim talis, non mors sed vita putatur:
Non moritur mundo, vivitet ipse Deo.
Oret pro nobis; omnes oremus et ipse Christum
Et nos ad vitam perveniamus. Amen."

A blank translation running:—

"The vanished shepherd of his flock is mourned,
Let faithful throng console your deepened sorrow.
Oh, cruel fate! him, seized by the grasping jaws of death,
But neither grief nor groaning can avail that life
Nor tears; why, therefore, great and many wails?
'Tis useless, rather sore distress.
But though no usefulness is gained from sobs,
'Tis but a human phase to grieve a father's loss.
In pious duty may we yet rejoice; for if the mind
Can bridge the tide of sadness
We view a death like this as yet a life esteemed;
And, dying in this world, his resurrection is in God.
Pray he for us and pray we all that he as
Well as we may come to life. Amen."

THE DEGREES OF THE UNIVERSITY OF LONDON.

To the Editors of THE LANCET.

SIRS,—From papers sent to me by the clerk I observe that at Convocation, to be held on June 23rd, the resolution as under is to be moved by Mr. Spratling:—

"That the excessively high standard maintained by this University in conferring its highest degrees has worked an injustice to many of its graduates and is the main cause of the agitation from which the University is at present suffering. That steps be therefore taken to co-ordinate these degrees with those conferred by the other British universities: 1. That for this purpose powers be obtained to confer the title of 'Fellow of the University' upon all graduates who up to the present have attained, or shall in the future attain, to the highest degree in their several faculties, according to the present high standard. 2. That the degree of Master or Doctor be conferred upon all Bachelors in the several faculties who have reached, or shall hereafter reach, such a standard in Honours in their final examination as the Senate may deem adequate."

Some years ago Convocation discussed the same subject very fully at a large meeting and rejected a similar resolution, and I myself travelled a long way and at considerable inconvenience to vote against it. I object to the resolution above on the following grounds. First, I do not wish to be credited with or have attached to my name any title I have not earned by hard study and a legitimate and searching examination; and it is just "the excessively high standard maintained by this University in conferring its highest degrees" which renders them, in my estimation, of supreme value, and places them above all others in this or any other country. Secondly, I object to gentlemen, Bachelors of the University, obtaining the higher degree without having undergone the like study and the like examination, for I look upon such a proceeding as unjust to myself and my *confrères* in the medical faculty. I trust, therefore, that the proposition No. 5, to be moved at Convocation next Tuesday, will meet general and successful opposition.

I am, Sirs, yours faithfully,

Truro, Cornwall, June 16th, 1896. WM. DALE, M.D. Lond.

CHOLERA IN EGYPT.

To the Editors of THE LANCET.

SIRS,—From the spring of 1884 to the autumn of 1895 Egypt remained perfectly free from malignant or Asiatic cholera. During this period of eleven and a half years not one single death was attributable to the disease throughout the length and breadth of the land. In September, 1895, suspicious cases occurred at Menzaleh, but it was not until Oct. 12th that cholera was unmistakably recognised. Writing on Jan. 28th, 1896, Dr. Rogers Pasha says: "I have no doubt that when the full report of the present epidemic comes to be written the probability, if not the certainty, of the introduction by pilgrims will be fully established." The disease rapidly spread over the Delta and even reached Cairo, but by the end of January, 1896, one place alone remained infected. For a period of ten or eleven weeks there was absolutely no cholera in Egypt except at Alexandria, where fresh cases continued to occur at short intervals. It was not until the latter part of April that the provinces became re-infected, the contagium this time appearing to be more virulent than at first, probably on account of the increasing stagnation of the water-supply. For the sake of brevity I have stated my argument in dogmatic fashion, but writing at a distance and with necessarily imperfect knowledge I am quite prepared to accept correction. My suggestion is that cholera, having been imported in the first instance from the Hedjaz, was successfully dealt with except in Alexandria, where it continued to smoulder for close on three months after it had been extinguished elsewhere, and that re-infection of the rest of Egypt subsequently took place from this secondary focus.

Alexandria has the misfortune to be very badly sewered, and it is in this wealthy town also that the rights conferred by the capitulations especially hamper all efforts at sanitary reform. To the best of my recollection the cholera epidemic of 1883-84 lingered in Alexandria long after it had worn itself out in the country generally, but unfortunately I have no means of verifying my impression. The money loss to Egypt from an epidemic of cholera is very great, but if the sanitary department were adequately financed (to use the expression of a recent writer in the *Pall Mall Gazette*) it should be possible in this respect to safeguard the national treasury. Perhaps in this connexion you will allow me to quote from a paper of mine which saw the light in 1892:—

"From a cosmopolitan point of view it is evidently high time that one of two things should be done in the interests of the health of the world. The pilgrimage should either be abolished or else subjected to efficient sanitary control. Till one or other of these measures is adopted Europe can never be safe from the attacks of the most deadly of pestilences. The present epidemic at Hamburg and elsewhere most unquestionably owes its origin to the Meccan pilgrimage. The Hadjis on their return along the various caravan routes have spread the germs of the disease broadcast, and though for this year the virulence of the outbreak

[1] Darenberg: Ackermann.

seems now to have abated, yet who will answer for what may happen in the immediate future. One thing is certain: if cholera should again reach Egypt let the bondholders beware. Dervishes and inundations are not the only enemies to be repelled at the cost of a million per annum. Let them spend something also on sanitary assurance. The sanitary administration possesses a most efficient director, but he lacks the means to execute his designs. He is compelled to make bricks without straw, and often the very clay is refused to him. Allow him the necessary funds and before long the country, purged of its sins against hygiene, will, with its glorious and life-giving climate, be second to none in the world for salubrity."

I am, Sirs, yours faithfully,

St. John's, Woking, June 15th, 1896. H. R. GREENE.

THE CAUTERY IN OVARIOTOMY.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of May 16th Mr. Tait claims that he has discovered the true principle of the cautery as used by Mr. Baker Brown and Dr. Keith. This shows such a want of memory of his own writings, and want of knowledge of the writings of others, that it seems almost beyond belief. In 1883 Mr. Tait wrote: "When he (Dr. Keith) removes the clamp, that part of the pedicle which has been embraced by it is shrivelled and translucent like parchment." Mr. Tait had therefore either seen the cautery applied or had had its mode of application explained to him. He has evidently forgotten this and also the method of application, for he speaks of great physical exertion and of the time required being twenty or thirty minutes. There is no special exertion, and when we used the cautery irons at a dull red, never a black, heat seven or eight minutes was the average time; now, by using them at a white heat three minutes are sufficient. In Dr. Skene's work on "Diseases of Women," published in 1888, the principle of action is described in the following words: "The object is to desiccate at least half an inch of the stump and to avoid charring it." In a paper on the Cautery in THE LANCET of April 30th, 1892, I said "the compressed part of the pedicle will, if all be satisfactory, have the appearance of a piece of horn. ..... Bleeding never occurs after the abdomen has been closed, and to prevent it at the time of operation the two essential points are the screwing up tight and the heating of the blades of the clamp." The amusing part is that Dr. Keith found out the explanation only after performing several operations on animals, and now Mr. Tait, having partially forgotten or perhaps not thoroughly understood what he described thirteen years ago, tells us that operations on animals are unnecessary. I am, Sirs, yours faithfully,

Charles-street, W., June 10th, 1896. SKENE KEITH.

"ANTERIOR COLPOTOMY."

To the Editors of THE LANCET.

SIRS,—I should be glad if you would allow me to record in THE LANCET my remarks on Dr. John Phillips' paper on "Anterior Colpotomy" read at the last meeting of the Obstetrical Society. They were not forwarded owing to a failure of the post-office arrangements.

I said that the difficulty of making and keeping the vagina aseptic as set forth by Dr. Phillips seemed to me a very serious objection to the removal of intra-peritoneal disease by anterior colpotomy; and that another important objection was the fact that, when small tumours or inflamed ovaries required operation, their removal was frequently so difficult that it was not possible to operate with any safety by anterior colpotomy, whilst the easier cases should have no mortality, except from purely accidental causes, if done by abdominal section. Under these circumstances it seemed to me that to operate on intra-peritoneal pelvic conditions through the vagina must add to the risks in all cases in which this plan might be contemplated. I should like to add that the cases in which the ablation of inflamed ovaries and tubes is required, but in which it is almost or quite impossible to completely remove these organs even when the parts have been fully exposed, are sufficiently numerous already without the operator handicapping himself by the difficulties and dangers of working through a strictly limited space of doubtful ascepticity. It seems to me certain that the plan of operating by anterior colpotomy must not only cause greater danger to the patient but that it must also lead to an increase in the number of imperfect operations. The evils of these imperfect operations do not appear in statistical tables. They can be discovered only by the study of the after-histories of cases. Personally I have performed few operations which could have been done by anterior colpotomy. I have not performed any operation in which I can believe that the slightest advantage could have been gained by adopting this method, and I have done many successfully in which an attempt to operate through the pelvic outlet would have ended inevitably in failure.

I am, Sirs, yours faithfully,

Portman-street, June 15th, 1896. JOHN D. MALCOLM.

THE ST. JOHN AMBULANCE ASSOCIATION AND ITS LECTURERS.

To the Editors of THE LANCET.

SIRS,—The St. John Ambulance Association has, with the coöperation of the medical profession, accomplished much that is excellent, and I, like other medical men, have taken great pleasure in the work done for it. Consequently, I was not merely surprised but sorry to find this Association taking up a position in regard to the profession which has compelled me to resign my honorary membership. The matter will probably be a surprise to most if not all of the ambulance lecturers, and it seems to me of such importance that I venture to give it publicity in your columns. The facts need occupy but little space. The authorities of the local Young Women's Christian Association requested me to give them lectures on nursing. They gave me various reasons why they did not propose to form a class in connexion with the St. John Ambulance Association, among others that the pupils did not wish to enter for any examination. The request was only for two lectures, and it was at my own suggestion that the number was increased to six. A lady who is one of the Ambulance Brigade nurses promised both the superintendent of the Young Women's Christian Association and myself independently that she would give assistance in her private capacity. The hour of the lectures was such as not to interfere with any brigade work. To my astonishment this lady informed me later that she must withdraw from her promise because the ambulance authorities "could not give their sanction." Wishing to avoid any unpleasantness, I accepted the position and gave additional time and work to make up for the loss of her friendly assistance. Much to my annoyance, a few days later I was informed by a medical neighbour that the ambulance authorities were criticising my conduct in giving such lectures as unfriendly and even shabby. A letter to, and interview with, the local honorary secretary, Mrs. Colegrave, showed me that her part in the matter had merely been to carry out instructions from headquarters, so I wrote asking that I should be informed from headquarters: "1. Whether they consider the fact of a doctor having delivered lectures under their auspices should preclude him from doing any similar work at the request of others? 2. On what grounds they used their influence to prevent a lady who was willing in her private capacity to give me some assistance with a nursing class from carrying out her intention?" The following reply was communicated to me. (The italics, &c., are Sir Herbert Perrott's.)

"St. John Ambulance Association, May 23rd, 1896.

"DEAR MRS. COLEGRAVE,—With reference to Dr. Carruthers' letter which you have submitted to me, my opinion is, while in the abstract there is nothing to prevent a medical man from lecturing in accordance with the syllabus of the association whenever and wherever he pleases, the fact that he has accepted the position of honorary life member offered him in recognition of his services on behalf of the Association *should tend to induce him not to give lectures on the lines of the Association except under its auspices.* As superintendent of the Norwood Nursing Division you are fully within your right in forbidding one of your enrolled nursing sisters to assist in any way at lectures on the subject of first aid or nursing, whether in connexion with the Association or not. In so doing she cannot be said to be acting in her private capacity.

"Yours faithfully,

"HERBERT C. PERROTT.

"If Dr. Carruthers and the nursing sister wish to instruct classes on their own account it would be more honourable in them to resign honourable life membership and membership of the nursing division respectively. By not doing so they are leading people to infer that they are acting under the auspices of the Association, and as their pupils will not be examined by our examiners, or get our certificates, it is very hard on them—that is, the pupils. H. C. P."

While this letter skilfully evades a categorical reply to either of my questions, it left only one course open to me, for the postscript to all intents and purposes called upon me to resign because I had lectured to the Young Women's Christian Association class. My reply is subjoined.

"44, Central-hill, Norwood, S.E., June 11th, 1896.

"DEAR SIR,—I am much obliged for the information contained in your letter of May 23rd to Mrs. Colegrave (of which I have this day

received a copy). As I cannot allow myself to be prevented from giving help to other people when asked, I beg herewith to return my diploma of honorary life membership and to resign that position. It might have been better if you had taken some steps to ascertain the facts before writing your postscript, as the statement (implying a somewhat serious charge) that in taking this class I was 'leading people to infer that I was acting under the auspices of the Association' is entirely erroneous and unfounded. I was specially requested to take it as a class independent of the St. John Ambulance Association, sufficient reasons being given me to justify my acceding to such a request, and its independence was perfectly well known to all concerned. You also seem to assume that the lectures in question were 'in accordance with the syllabus of the Association.' This was not the case, as there were considerable additions and not a few omissions as compared with the contents of that syllabus. I informed Mrs. Colegrave when I asked for a copy of your letter that I intended to send the correspondence to the medical press.

"I am, faithfully yours,
"S. WM. CARRUTHERS.

"Lt.-Col. Sir Herbert Perrott, Bart."

I am, Sirs, faithfully yours,
Norwood, June 12th, 1896. S. WM. CARRUTHERS.

THE REMUNERATION OF MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—It is very noticeable that there are marked signs in the profession of discontent and dissatisfaction at the rate of remuneration and treatment received by the general practitioner. There is also ample proof that this feeling is gaining force like a rolling snowball, and that members of the profession are beginning to recognise—tardily enough, but surely—that combination for their general interests is the only way in which they can hope for relief. It is much to be regretted that the forces cannot be arranged under one banner. We have more than one medical defence society, many "associations," and a body of medical men working somewhat after the fashion of the Incorporated Law Society. All of them do useful and honourable work. It is perfectly obvious, however, to any thinking mind that the very number of these institutions means disunion in its worst form. Scattered forces, apathetic leaders, petty jealousies and bickerings, the result of attempts at personal advancement under the guise of disinterested work for the profession,—all these and similar causes hinder, and very seriously hinder, that universal cohesion so essential to the success of any great movement. One important matter concerning which members of the profession as a whole are singularly indifferent is the benefit which would almost certainly result from our parliamentary representatives taking an interest in the question. There can be no question that an amendment of the Medical Acts dealing with unqualified practice is urgently needed and is only to be obtained by political pressure. The influence brought to bear by the united action of our profession, exercised directly or indirectly, would be enormous if properly used at election times, and our cry should be a reform of the Medical Acts. Surely it is a monstrous injustice to medical men that when they have conformed with the law of the land by obtaining degrees or other qualifications at the expense of much labour and pecuniary sacrifice they should have to compete against charlatans of all kinds. Is it not an anomaly strange and ridiculous that the General Medical Council can remove a man's name from the Register for nefarious or criminal conduct, and yet that he continues to thrive and practise, though he cannot recover fees at law or sign a death certificate? There are instances of this strange state of affairs now in London well known to many members of the profession.

Overcrowding in the ranks of the medical profession is so notorious that allusion to it is superfluous. The number of ways in which a young man may obtain a diploma, the comparative cheapness of the minimum education for the minimum legal qualification, and the exaggerated ideas possessed by the public of the emoluments of successful medical men—all induce the middle-class parent to regard the profession of medicine as the key to solve that most thorny problem, "What are we to do with our sons?" It is certainly true that in any walk of life attended with competition everyone cannot succeed. The qualities of integrity, steadiness, thrift, tact, common sense, and indomitable perseverance are as essential to success in medicine as in law or in mercantile pursuits. Excellent and complete professional knowledge is of the first importance, although this is probably less essential in medicine than in many other occupations or professions. It is a common and every-day fact that it is not men of the highest professional attainments in medicine who of necessity obtain the highest professional success from a pecuniary point of view. A remarkable fact regarding medical education may well be pondered. We instruct our young men in what can be acquired during five or six years of a knowledge of the most recondite problems ever presented to man in the study of the phenomena of disease. At the end of this time a clever and industrious student may, especially if he has held hospital appointments, be well practised in the principles of his profession and trained in accuracy of thought and powers of close observation and reasoning. But he will be ignorant regarding what may be termed, without offence, the business side of his profession. Among the many curious doctrines which have survived regarding the practice of medicine there is one which is not to be spoken of with contempt, since it has been held and promulgated by some of the leading men of the profession. To put it plainly, parents who have expended large sums of money to give their son a medical and university education will be surprised to hear that he has been told by some of his teachers that medicine is a noble profession, that it has rewards not to be measured by money, and that no one who practises it in a proper spirit should regard the question of fees. These phrases, or similar ones, commonly form the stock-in-trade of some of the introductory addresses at our medical schools, and as they are often delivered by men of light and learning they merit some attention and examination. No one can deny the first two propositions, but the last requires very serious consideration at the hands of the profession and the public. This platitude, which has probably descended directly from remote periods, when medicine was in the hands of the priesthood, has long held ground. It is remarkable, however, that any critical observer who closely watches the practice of some of those who most strongly denounce the question of fees will soon be able to formulate doubts as to the sincerity of their actions. Either it is right for a physician, surgeon, or practitioner to be paid for his services, or it is not, and, if a man holds that it is not, then he should refuse to receive pecuniary emoluments at all and practise as a pure philanthropist. Through a mistaken kindness many of the most excellent and large-hearted men of our profession, possessed of good private means, give away their services freely, and the damage they do to the pecuniary position of their less fortunate and poorer brethren is incalculable. There can be no doubt that it should be a thought on the part of our teachers in the larger schools, not only what is to become of their students while they are under their immediate care, but what is to become of them afterwards. Every man will find his level in the struggle of life, but there can be no question that the sympathy and aid of the leading men of the profession should be extended to the rank and file far more than is at present the case. The younger race of consultants, and especially the students, must never overlook the natural law that increase in the supply of any commodity leads to diminution of its price. It is a well-established fact that a superabundance of any kind of skilled workmen will lead to a cheaper rate of wages for that particular class of individual. Every man, professional or otherwise, has a right to work for what reward he chooses, and the forcible methods of dealing with "blacklegs" advocated and employed by some of the more ardent disciples of our labour leaders can hardly be extended to professions the members of which are agitating for reform.

Dr. Kehlman, speaking at the meeting of the San Francisco Medical Society on Oct. 8th, 1895, said "he was ready to defend the cause of the practitioners with sword, bullet, or pen." We are less truculent in this country, and the latter weapon is, perhaps, less potent for sudden reforms than the two former. Great changes and great improvements are seldom to be wrought in a day, and more can be effected by slow and sure progress than by sudden revolution. Behind the story of sixpenny clubs and cheap medical associations comes the tale of overcrowding in the profession, and this is directly fostered by the competition of medical schools and by qualifying examinations which demand a minimum of practical knowledge. These and similar reflections show how vast is the subject of medical reform, and what an urgent need there exists for a universal association of medical men for the protection of their own interests. The lines upon which the coming generation should work are clear enough. We should

endeavour to raise the professional knowledge and status of medical men and make them worthy of proper professional emoluments; and we should, by all means in our power, induce our students to combine, wherever they are, against cheap clubs and similar abuses. All hospital staffs, especially in country towns, may well take to heart the excellent example which was set them at Swansea. They should definitely take up the line that a hospital exists for charity in the first place and for medical education and progress in the second. The "sixpenny doctors" will still exist; they will, however, become fewer, and be recruited from the inferior grades in the profession. The public will in time become educated to the danger and uselessness of such modes of obtaining professional advice. There are many meetings for purely professional purposes held in our larger cities and towns. The thought of an annual congress for the discussion of matters of professional reform and political combination may well engage the attention of all our associations of medical men during the present year. I am, Sirs, yours faithfully,

June 15th, 1896. M.D.

MEDICAL BULLETINS, PROFESSIONAL ETHICS, AND COMMERCIAL SPECULATION.

To the Editors of THE LANCET.

SIRS,—During the past few weeks there must have been many like myself who have been vainly waiting and expecting some one in the higher ranks of the profession to utter a protest or ask for an explanation of the unedifying spectacle which the illness of the distinguished President of our Royal Academy has been the means of placing before us. One cannot recollect a case where the constant reiteration of the medical attendant's name has been carried to a greater length than in the sad illness of this illustrious man. For some weeks now the public has been daily (often twice) treated, not merely to information about the progress of the sufferer himself, in which, of course, we all have a sympathetic interest, but also to the important fact that his medical adviser, whose name is each time given, visited him at such and such an hour. What, Sirs, is the purpose of these details? The public may want to be constantly informed of the distinguished patient's condition, it may also interest them to know who is in charge of the case, but after having given the latter information on two or three occasions, what can be the purpose of its constant appearance unless it is to keep the attendant's name before the public? It may be said that the practitioner is not responsible for the mistaken pressman who is desirous of every detail of information for "copy," but such an excuse is too feeble to bear investigation. Undoubtedly it is almost impossible for a practitioner to avoid the publication of his name in the early days of the illness of any distinguished person, but every medical man must and does know that the profession to which he belongs, and of whose honour he should be jealous, strongly disapproves of anything that could be interpreted as an advertisement, in which the attendant acquiesces. A few polite lines to the editors of the papers in which such objectionable statements had repeatedly appeared, requesting them only to give the substance of the bulletins without time after time mentioning the attendant's name, would be certain to have the desired effect.

In spite of our so-called professional ethics (surely rapidly becoming a name only) this form of abuse has become so frequent of late that I would not have considered the present instance anything more than a particularly fine specimen of its kind were it not that a more serious offence has within the last three weeks been added to it. We have been informed and startled by announcements made at various times in at least two of the morning papers that the improvement which fortunately had taken place in the President's condition had been fairly maintained and that this was attributed to inhalation of ozone introduced into the treatment by the practitioner in charge of the case whose name is each time given. Then, Sirs, one felt surprised that no voice was raised to ask if such announcements were in keeping with the traditions of our profession, and, if not, were we to congratulate ourselves on the innovation? But the climax was yet to come. Last week I, in common, no doubt, with many others and thousands of the lay public, received the enclosed prospectus from a commercial ozone company in which you will find the following passages: "In addition to the uses for industrial purposes to which ozone may be put it is probable that in future it will play a very prominent part in medical practice, and the following extracts from London newspapers are cited in support of its value. From the *Times*, May 26th, 1896: "Sir John Millais' condition was reported last night to be satisfactory. It is stated that to meet certain complications which arose in the condition of Sir John Millais Dr. Hames, who has been in constant attendance since the operation, decided on the application of constant inhalations of ozone. This was immediately followed by beneficial results which have since continued." From the *Standard*, June 1st, 1896: "The marked improvement in the condition of the President of the Royal Academy noted on Saturday morning has been fairly maintained, and this is attributed to the ozone inhalations introduced into the treatment by Dr. Hames." This prospectus was followed by the *Standard* bulletin: "The ozone treatment introduced into the case of the President of the Royal Academy continues to give most beneficial results, enabling the patient to obtain a considerable amount of good rest. On Saturday morning Dr. Hames was able to issue an exceedingly favourable statement as follows," &c. Alas! Sirs, to what have we come! Well may men often smile when professional ethics are mentioned, and rapidly turn conversation to a subject where their words have some pretence of meaning in them. One is pained to think that the illness of a distinguished man should be made capital of for a commercial puff, and humiliated when one sees the name of a member of our profession appear in the latter. I presume, of course, queer though the matter looks, that this prospectus has been issued without the knowledge and consent of Sir John Millais' medical attendant. Anyhow, I think he owes it to his profession to clear the question up without delay. Should he be unwilling to do so it seems high time that the authorities of the Colleges to which he and I belong should take the matter in hand. I enclose my card, and remain, Sirs,

Yours faithfully,

June 16th. M.D., M.R.C.S. & L.R.C.P., &c.

THE BATTLE OF THE CLUBS.—XXXIII.

(*Continued from p. 1675.*)

THE GENERAL MEDICAL COUNCIL AND THE MEDICAL AID ASSOCIATIONS.

AT the meeting of the Executive Committee of the General Medical Council of June 1st the following letter was read:—

Friendly Societies' Medical Alliance Council,
April 21st, 1896.

DEAR SIR,—At the annual conference of the above, held at Wednesbury on Easter Monday, Mr. S. Pride of Luton, Mr. Dickinson of Lincoln, and Mr. M. J. Williment of Norwich, were appointed a deputation to wait on the General Medical Council at their next meeting for the purpose of laying before them the present attitude of some members of the medical profession towards friendly societies' medical associations. If you will arrange the day and hour most convenient to the Council to receive the deputation and acquaint me, I will then arrange for the deputation to be there at the appointed time and place.

Yours most respectfully,

W. J. C. Miller, Esq. JOHN BROWN, 26, Markham-street, York.

It was resolved "that Mr. Brown be informed that the executive committee cannot recommend the General Medical Council to receive the deputation referred to."

It may be that the executive committee was within its powers when it intercepted a communication of this character and deprived the representatives of the Friendly Societies' Medical Alliance of an opportunity of stating their grievances as to the attitude of "some members of the medical profession" towards their associations. No doubt they base themselves on the conclusion of the Council that such matters are not within their jurisdiction. All the same we somewhat regret that the deputation was not received. These associations are sadly ignorant of the feeling of the medical profession—not "some of its members," as the letter would have us believe—on the subject of such associations and of the part they have tried to play in trying to degrade medical practice and medical practitioners. They are even more misinformed if they think that the Council would be willing to force medical men to alter their attitude of hostility to such a system. A few minutes' interview with the General Medical Council might have undeceived them on both points. They will at any rate realise that they have nothing to

expect from the General Medical Council. The associations will receive more and more proof that the profession as a whole is against them, and will do well to come to terms with it confining the privileges of their associations to working men and their families and paying them properly as they are well able to do.

If the General Medical Council is so restricted in its disciplinary functions the medical corporations and the voluntary associations of the profession are not so restricted and may make their power felt. If the voluntary associations of the profession can be moved to a full discharge of their duties in this matter there will be little need for the use of the disciplinary power of the bodies.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Jubilee of the Swinton Schools.

THE report of the Poor-law Schools Committee on the barrack schools of London has drawn attention to some of the workhouse schools in the provinces. Now those at Swinton, about four miles from the city, under the management of the Manchester guardians, are among the largest in the country, and their jubilee has just been celebrated. They were opened in February, 1846, and provide accommodation for about 760 in the main building and 110 in the hospital and receiving wards. When they were built there was no controversy about the "barrack" system, the "cottage home," and "boarding-out." The chief aim was to get the children away from the workhouse with its degrading and vicious influence, and as there were many of them it seemed obvious that a large house was required to hold them. There are now about 750 boys and girls there, chiefly Manchester children, but a few are boarders from the Barton and Wigan unions. Though schools would not now be built as in 1846, it must be allowed that these have been well and humanely managed. The children may be divided into two classes—those who spend all or the greater part of their school life in the school, and those who come and go, entering and perhaps leaving in the same quarter and almost certainly in the year, for the guardians, of course, have no power to detain a child against the will of the parents or legal protectors. Of 700 in the school a year or two ago about 600 were liable to sudden removal, so that it is easy to understand that with this shifting population the maintenance of discipline and "character" is no easy task, and yet we read "that there is no record at the Manchester workhouse—at least, for the last sixteen years—of any boy who had gone through the school entering the workhouse to live there. Many have worked themselves into good positions and they and others speak kindly of their early life." Besides the scholastic work the boys learn various trades—as tailoring, shoemaking, gardening, &c. There is a good swimming-bath, which is very popular, and many of the lads would do credit to any swimming club. A short time since an article appeared in the *Manchester Guardian* containing some severe criticisms of the London schools, in which the Swinton schools were incidentally mentioned as being the largest in the country, and this article was thought likely by the guardians to make the public believe the Swinton schools were deserving of the same condemnation. Mr. McDougall, chairman of the schools committee, thought it necessary, therefore, to refer to the matter at the meeting of the guardians. The *Guardian* said that the "barrack" schools were: "(1) directly injurious to the health of the children; (2) detrimental to their mental development; (3) harmful to their morals; and (4) more costly and more difficult to maintain in proper working order than smaller institutions would be." Mr. McDougall said they were almost free from ophthalmia, though many years ago it was prevalent, but was got rid of by simple means. The children no longer used common wash-bowls; each one had a jet of clean water to wash with and had three clean towels a day. It was said that "eczema and other skin diseases are always prevalent" in "barrack" schools, but it was not so at Swinton. And as to their physical development, he said that the remark that the boys were "stunted and narrow-chested" and most of the girls "below the normal height, and the appalling monotony of their lives makes them tend to become dull, sullen, and mechanical, and to lose interest alike in work and play," was certainly not the case at Swinton; "if there was one thing on which they prided themselves it was that when the children played they were merry, and when they were working they felt their work had some purpose. ..... The guardians sought to make their lives bright and to fit both boys and girls to earn their living." The cost per week is a little over 5*s*., and the guardians are not anxious to make it less, for they wish the children to have good food and clothing. Of course, when one knows the places from which most of the children come, the character and physical condition of the parents and the lives led by a large proportion of them, it would be marvellous if the signs of degeneration marking the parents did not descend to their offspring. The short period during which the majority are in the school is not sufficient to overcome the disadvantages of their start in life, but where more time is given both boys and girls improve physically in a remarkable manner. It is said that the headmaster has many applications for any of the girls who will go into domestic service, which, however, is not always popular with them. Many go to factory work or are apprenticed. On the whole I may say that if the metropolitan "barrack" schools had been as intelligently managed as the schools at Swinton the report concerning them would have read somewhat differently.

The Coronership.

At the last meeting of the City Council Mr. Smelt, barrister, who had been for many years deputy coroner, was appointed coroner in the place of the late Mr. Herford at a salary of £800 a year. The late coroner had been non-existent—so far as the performance of the duties of the office was concerned—for at least fourteen or fifteen years, with the exception of what he no doubt considered the important duty of receiving the fees. By the conditions of his appointment he was paid by fees and was irremovable, and he retained his office to the end. He was a man of strong will and some pugnacity and in his active days was usually in antagonism with the medical profession of Manchester. However, nothing but good should be said of the departed, and as the retention of his office long after he was incapacitated was no doubt legal he perhaps considered—for his opinions on many matters would by most people be thought eccentric—that it would be illegal to resign. At the council meeting Professor Sinclair made some observations criticising Mr. Smelt's proceedings so far as they related to medical evidence and post-mortem examinations, and said that one of the objects of a coroner's inquest was to ascertain the cause of death. On taking his seat for the first time as coroner for the city, Mr. Smelt "made some remarks on the position and duties of coroners" and wished "to brush away" a good deal of misunderstanding. He said inquests were held for the benefit and protection of the public. "It was the duty of the coroner's court to ascertain the cause of death, not for statistical, medical, or scientific purposes, but to find out whether any person was responsible. ..... So long as he presided in that court he should never order a post-mortem examination unless he believed it to be absolutely necessary." His reasoning seems peculiar, for after stating it to be a duty to ascertain the cause of death he goes on as follows: "If the jury were satisfied that a case was a perfectly straightforward one and that nobody was to blame, why go to the trouble of ascertaining the *exact* cause of death?" It is a duty, therefore, to ascertain the cause of death, but not the exact cause; it need only be known inexactly as it is merely for the benefit of the public, though it is not clear how inaccuracy is for the public benefit. Is this view in exact accord with common sense? In a subsequent part of his address Mr. Smelt said that where it was possible he obtained the evidence of gentlemen who were in the habit of making post-mortem examinations and of giving evidence in courts, because he thought it better that they should have the evidence of experts. This is a wise proceeding and will be generally approved, especially when it is wished to ascertain the exact, and not the inexact, cause of death. No doubt the original intention of the court was to learn if death had been the result of foul play, but it is notorious that even "intelligent" juries often fail to return correct verdicts, especially where the coroner is a lawyer and not a medical man; but even if this were not so there is no reason why the coroner's court should not aid in rendering the Registrar-General's returns

accurate instead of misleading by giving the exact, and not the inexact, cause of death. In concluding his address he said that "he had had practically very little difficulty with jurors and medical men, and no trouble at all with the legal profession, during the eighteen years he had acted as deputy-coroner, and he had not a regret to express for his action in relation to them, or as another report gives it, "in connexion with those people." However, he bears no malice towards the "medical people," for he hoped their good relations would continue. He concludes by wishing "to impress upon the public" (including, of course, the "medical people") that the institution of the court was for the protection of the public alone, and not for medical or scientific purposes. It would always be his duty to protect the public, and save the time and money of the jury and ratepayers.

June 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Harveian Oration of the Harveian Society of Edinburgh.

DR. PEEL RITCHIE (Fellow and Past President of the Royal College of Physicians of Edinburgh, Fellow of the Royal Society of Edinburgh, &c.), the President of the year, chose for the subject of his Harveian oration the Early Days and First Knights of the Royal College of Physicians of Edinburgh. He endeavoured to show—first describing the state of scant medical teaching and medical examinations in Harvey's time, the want of infirmaries and of opportunities for meetings for conference upon medical subjects, not only in England, but in Scotland—the great good done by the establishment of the Edinburgh College of Physicians in contributing to the inauguration of those necessary reforms, and also as regards Scotland in preparing and publishing a pharmacopœia. Four attempts had been made to erect a College subsequently to Harvey's first lecturing, and each of the first three he associated with Harvey. The fourth attempt was made (the causes which had led to it being described) in July, 1681, chiefly at the instigation of Dr. Robert Sibbald. To bring influence to bear on King Charles II. and his brother the Duke of York, then in Edinburgh, at Holyrood, as the King's Commissioner, the influence of their physician, Sir Charles Scarborough, was sought and at once obtained. Very powerful opposition was made to the scheme by the same four opponents upon all the four occasions. Great efforts had to be exerted, therefore, to conciliate them by modifying the demands in the Charter. The opposition arose from the archbishops and clergy who were associated with the universities as Chancellors, &c.; the universities, who feared their prerogative, would be interfered with; and the town council, who were the patrons of the University of Edinburgh, and by the chirurgeons, whose rights would be disturbed. On the fourth occasion the nobility also objected. The aid of the Earl of Perth and Lord Melfort was sought to lessen their opposition, whilst Scarborough secured the good will of the king and the duke. Of the physicians associated with Sibbald, Dr. Andrew Balfour had been a pupil of Harvey and an intimate acquaintance of Scarborough; Archibald Pitcairn was one of the strongest supporters of Harvey's views in the country; Thomas Burnett was known by the importance of his works; and Sibbald seems to have known Scarborough when in London previously. On St. Andrew's Day, 1681, the Charter of Constitution was obtained, and immediately the College set to work to carry out the reforms required for the improvement of the profession so far as the College had power and jurisdiction. The first reform was the compilation of the Edinburgh Pharmacopœia, and although this was done within two years the opposition of some of the Fellows prevented it being published for sixteen years. The second effort at reform was the establishment of a dispensary for the benefit of the sick poor in the city and suburbs. This was carried on very constantly, and from it ultimately was developed the Royal Infirmary, towards the origination of which the College largely contributed, and undertook to give attendance upon the patients without fee or reward, the Fellows attending in rotation two weeks at a time. The third great effort on the part of the College was instituting an examination for the Licence required by all physicians practising in Edinburgh or joining the College. One annoyance the Fellows had to tolerate was that they had no power to examine Scotch graduates, and from the nature of the degrees granted by some of the universities the examination of their graduates was very necessary, more so than in the case of those applicants who were Continental Doctors of Medicine. The latter had all previously "laureated" and studied abroad for years. The examination introduced consisted of three stages—(1) theoretical on the institutions of medicine; (2) on two "Aphorisms" of Hippocrates; and (3) on two practical cases. One use of the dispensary seems to have been to supply "practical cases" for these examinations. This form was regularly used, and the examinations conducted by two specially appointed examiners, and they were carried on in the presence of the sederunt of the College, the assembled Fellows being the judges, whether the applicant was to pass or not. These examinations, or "tryalls," were continued for many years. At the request of the University authorities, when the first applicants for the Edinburgh degree of Doctor of Medicine applied, these examinations were undertaken by the College of Physicians, and at first conducted in their place of meeting and with the dispensary patients. The only charge made by the College was a contribution to the funds of the dispensary, which were distinct from those of the College itself. When a professor of physic was appointed the examiners met with him in the library of the University and there conducted the examinations. When another of the physicians was appointed professor of the institutes a faculty was formed and they conducted their own examinations thereafter. The fourth great effort on the part of the College was the instituting of the rudimentary medical society conferences, previously commenced by Sibbald in his own "lodging." The President, Dr. Archibald Stevenson, delivered the address at the first College conference, the subject being Polypus of the Heart. These conferences were continued for twenty-five years and were stopped by the action of Dr. Archibald Pitcairn. They seemed to have paved the way for ultimate development of the societies of the present day, starting with the Royal Medical Society of Edinburgh in 1734. The orator then narrated to whom the merit of these important reforms was to be assigned, and showed that the chief acting spirits of the early days were nine. He also indicated that his reason for his title of "the early days" was that from the origination of the College on St. Andrew's Day, 1681, to December, 1684, represented a period of two years and eleven months, during which the minutes of the College were kept, and that it was within that short time that the four great reforms were introduced. To distinguish that short period, from the minutes of the College business kept, after a hiatus of ten years, from 1694 to the present time he had designated it the "early days." Of the nine acting Fellows he showed the parts each had performed, and concluded that the honour of inaugurating the reforms are chiefly due to Dr. Archibald Pitcairn and four senior Fellows, who were knighted—Sir Archibald Stevenson, the first president; Sir Robert Sibbald, the second; Sir Andrew Balfour, the third; and Sir Thomas Burnett, who was not elected president till 1696; Dr. Ritchie concluded by an account of these four knights, especially Stevenson, Balfour, and Sibbald, the day of whose death and place of burial he had ascertained.

Proposed New Pauper Lunatic Asylum for Edinburgh.

As the result of conferences which have lately been held between the city parish council and the managers of the Edinburgh Royal Asylum to consider the question of erecting a new asylum for the accommodation of pauper lunatics it has been agreed that application should be made to the General Board of Lunacy to have the city parish constituted a separate lunacy district under the provisions of the Lunacy Districts (Scotland) Act, 1887, and for authority to erect an asylum in the new district for the housing of not less than 400 pauper lunatics. Pauper lunatics belonging to Edinburgh have been accommodated in the Royal Asylum at Morningside since the years 1842 and 1844, when the managers of the asylum received the sum of £3210, in consideration of which they became obliged to maintain in the Royal Asylum at their lowest rate of board all insane pauper patients belonging to Edinburgh, whatever their number might be. It was expected at that time that such patients would never exceed 105 in number, but lately there were as many as 365 pauper lunatics accommodated in the asylum. This resulted in such an overcrowding of the asylum that the managers have had to refuse applications for admission of private patients and have been obliged to apply to the Edinburgh parish council for a modification of the agreement,

and to that the council consented. 105 pauper patients are to be accommodated at Morningside until the end of the year 1914 in order to wipe out the debt incurred by building additions to the asylum for the accommodation of these patients.

Royal Society of Edinburgh.

At a meeting of the Royal Society a paper by Mr. Frank J. Cole was read by Professor Cossar Ewart on the Cranial Nerves of Chimæra Monstrosa, with discussion of the Lateral Line System and of the Comparative Anatomy of the Chorda Tympani Nerve.

Edinburgh Royal Infirmary.

At the meeting of managers held this week the plans for the new gynæcological department were laid before the board, as well as a report on the subject by the architects. The new pavilion is to be built on the site of the old Sick Children's Hospital. It is proposed that the basement be used as a bathing department, the first floor as an ordinary ward, and the second and third floors for gynæcological patients, while additional accommodation for the nurses would be provided on an upper floor, to which the main staircase would be carried. The plans were approved and the architects were instructed to prepare a bathing scheme.

Lord Kelvin's Jubilee.

The Corporation and the University of Glasgow have during the present week made common cause in their desire to celebrate with appropriate honours the professorial jubilee of the celebrated professor of natural philosophy. Lord Kelvin, then plain William Thomson, was appointed to the chair which he still holds in 1846, being then only twenty-two years of age. Since then his capacity for the most advanced scientific speculation and research and his powerful inventive genius have made his name and reputation world-wide. Probably to the general public his fame is most closely associated with the successful laying of the Atlantic cable, upon returning from which in 1866 he received the honour of knighthood. He was raised to the peerage as Baron Kelvin of Largs in 1892. The list of academic and other honours conferred upon him would fill a column or more; it is sufficient to mention that in 1871 he was President of the British Association, and that from 1890 to 1895 he occupied the chair of the Royal Society. It is no wonder that both town and gown should unite to mark in a becoming manner so interesting an event as the jubilee of so renowned a professor. Upwards of 200 delegates, representing British and foreign universities and learned societies, are at present the guests of the University, and congratulatory telegrams are pouring in from all parts of the globe. Yesterday the local jubilee committee sent their congratulations to Lord Kelvin by a cable message passing over the Anglo-American telegraph system, thus traversing a distance of 20,000 miles. The time occupied was seven and a-half minutes. In the evening the University gave a conversazione in the Bute Hall, the guests, numbering fully 2500, being received by the professors and passing on to offer their congratulations to Lord and Lady Kelvin. The exhibits included specimens of Lord Kelvin's numerous inventions and the diplomas, medals, addresses, &c., presented to him by various scientific and other learned societies. The various submarine telegraph companies had wires laid on to the Bute Hall and numerous telegrams were received and despatched during the evening. At the close of the conversazione the students held a "Gaudeamus" in the Union, and welcomed various foreign delegates in true undergraduate fashion. This morning was devoted to the presentation of addresses to Lord Kelvin and to the conferring of various honorary degrees. Lord Kelvin himself was "capped" LL.D., the cap being placed on his head by the senior professor, Dr. Gairdner. Amongst other messages received was a special letter of congratulation to Lord Kelvin from the Prince of Wales. To-night a banquet is to be given by the Corporation, and to-morrow there are to be excursions down the Firth of Clyde.

Medical Resignations.

Dr. James Stirton has retired from the position of physician for diseases of women in the Glasgow Royal Infirmary. Dr. Duncan Macartney has resigned his appointment as one of the surgeons to the Glasgow Training Home for Nurses.

Sudden Death of a Medical Man.

Dr. George R. Allan of Glasgow was found dead in his consulting-room chair on the morning of the 13th inst. He had been in his usual good health and entirely without cause for complaint, and was, indeed, proceeding with his usual daily professional duties. It is understood that the cause of death has been determined to have been disease of the coronary arteries, leading to degeneration of the cardiac muscle. Dr. Allan was one of the physicians to the Glasgow Hospital for Diseases Peculiar to Women. He was much respected and undoubtedly possessed the goodwill of all his professional brethren.

Enteric Fever at Kirkcaldy.

The spread of enteric fever in Kirkcaldy is exciting some alarm. The cases notified now exceed 100, and the local hospital being full it has been necessary to fit up one of the public schools for the reception of patients. Dr. Littlejohn has instituted an inquiry on behalf of the Local Government Board.

A Geological Excursion

A geological excursion from Aberdeen to Penrith, Cumberland, will take place next month. The party will leave Aberdeen on Monday, July 20th, and under the guidance of Professor Alleyne Nicholson (natural history), University of Aberdeen, visit the most interesting localities in the Lake District, returning on Saturday, July 25th.

Aberdeen University Court.

At the last meeting of this body regulations for the lectureship in Comparative Psychology under Dr. William Anderson's bequest were fixed. There is to be an annual honours course of not fewer than fifty lectures; the lectureship is to be tenable for five years; the appointment is to date from Sept. 15th next; the lecturer is to receive a free income of bequest (£350 per annum); and a fee of £3 3*s.* is to be charged for the course. An appointment will be made at the next meeting. It was reported that arrangements had been made for instruction of women in all medical subjects in mixed classes, but that in certain classes separate provision (covering a few lectures) would have to be made for the ladies. In surgery there will be "mixed systematic class, but women to be excluded from certain limited parts of the course." Principal Sir W. D. Geddes called attention to the throwing wide open of the doors of the university medical classes and the provision now made for the graduation of women. Professor Stephenson (Midwifery) observed that Aberdeen was the only university where ladies could enter and have the full privileges as enjoyed by male students. The Universities Commission have declined to sanction the imposition of an annual fee of 5*s.* upon students for the maintenance of a students' union, recreation ground, and similar purposes.

June 16th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Army Medical Deadlock.

SINCE the date of my allusion to the above matter last week considerable interest has been aroused in public as well as in medical circles here by a series of letters which have appeared in all the morning papers in reference to the subject. Sir Thornley Stoker, Professor Cunningham, and Professor Ball of Trinity College, Professor Heuston of the Royal College of Surgeons in Ireland, and Professor Birmingham of the (Roman) Catholic University, claim to write as responsible representatives of the medical schools of Dublin, and are unanimous in condemning the problematical efforts of some individual supposed to be connected with medical teaching in Dublin, "to bargain," as has been hinted, "with the War Office in reference to examinerships in such a manner as to hinder the promulgation of the new warrant." The writers say: "If it be true that individual effort is being directed in the manner that is feared it is not necessary to characterise the want of judgment, or worse, that prompt it." Is there, however, any real truth in the rumour? It seems more than doubtful. Professor Heuston, many of whose former pupils are to be found in the ranks of the Army Medical Service, states that "he cannot hear of a single candidate being prepared in Dublin for the coming examination." They doubtless hold back in expectation of the new warrant, which, as was remarked in THE LANCET of last week, may not be very long delayed, seeing that Lord Lansdowne is the present War Minister, that we have a new

Commander-in-Chief, and a newly appointed Director-General.

The Connswater River.

The condition of this river, which is in the eastern side of the city of Belfast, is at present the subject of considerable public discussion. This stream, alongside of which 2500 operatives are employed daily, is flanked on both banks by factories and receives sewerage matters both from the rural and city sides. The smell from it at present is intolerable, and the Board of Guardians some time ago spent £12,000 for the purpose of abating the nuisance caused by the river outside the city. The Board of Guardians are inclined to think the major amount of the nuisance now comes from the city side, and they passed a resolution on June 9th at their meeting, calling upon the public health committee to take such immediate steps as will prevent the discharge of offensive matter into the river from the city side. The most likely way out of the difficulty would be for the harbour commissioners, the Corporation, and the Board of Guardians to take joint action to stop the nuisance occasioned by this stream. At the public health committee of the corporation the executive sanitary officer reported on June 11th that the nuisance at the Connswater arises from three causes—the discharge of sewage spirit wash (from the distillery there) and large quantities of hot water into the river; these discharges, the present hot weather, and the extent of the mudbank at low tide being sufficient to account for the present insanitary state of the river. Communications are to be made to the guardians, the Rope Works Company, and the Distillery Company to bring about a more desirable state of affairs.

The Training of Imbecile Children.

A memorial and resolution on this subject has been recently approved by the Armagh Lunatic Asylum Board, and they directed that it should be forwarded to the Lord-Lieutenant and to all the asylum governors in Ireland requesting their coöperation. The memorial points out that there is no public institution in Ireland for the training and education of idiot and imbecile children. By the census of 1891 there were 6245 idiots and imbeciles, of whom 996 were in lunatic asylums, 1170 in workhouses, and 4079 were at large. In England there are three and in Scotland two institutions for the training and education of imbecile children. Workhouses are the only public institutions in Ireland where pauper idiot children can be sent, and these places are quite unfitted for their proper training and care. It was further pointed out that differences have recently arisen between Poor-law guardians and asylum governors as to their responsibilities for the care of pauper idiots. The Lord-Lieutenant was asked to cause inquiry to be made to define more clearly with whom lies the responsibility and to direct steps to be taken to make provision for the treatment of idiot children in a separate institution.

The New Derry Lunatic Asylum.

The board of control in Dublin has written to the governors of the Derry Asylum informing them that the time has arrived for considering the preliminary arrangements which it is necessary to make for building a new asylum at Gransha. A deputation from the board (consisting of the inspectors and the consulting architect) are to have a conference with the asylum governors on July 9th with a view to consider the arrangements which it is necessary to make.

The Proposed Sewage Scheme for Portadown.

There seems to be great difficulty in planning a sewerage scheme for Portadown. The town commissioners, who have had the matter under consideration for some time, were compelled to abandon a scheme they submitted owing to certain ratepayers objecting to the sewage being drained into the River Bann, which is contrary to the provisions of the River Pollutions Act. Recently they decided to empty the sewage into the Corcrain River, and against this plan a petition, signed by 500 ratepayers, has been forwarded to the Local Government Board.

Lord Kelvin's Jubilee.

The jubilee celebrations this week in Glasgow in Lord Kelvin's honour have caused the greatest satisfaction in Belfast, where the distinguished physicist was born, in College-square in 1824, his father, Dr. James Thomson, being at the time professor of mathematics in the Belfast College. Lord Kelvin's father was descended from a family of Scottish farmers who settled in Ulster, and he was born in a small farm at Ballynahinch, in co. Down. He became a teacher near his birthplace and taught during the summer at home, while in winter he studied at Glasgow. After graduating he received an appointment in Belfast and soon afterwards married. He had a family of five sons and three daughters. One of the sons was the future Lord Kelvin, who was eight years old when his father was appointed Professor of Mathematics in Glasgow University. Another brother of Lord Kelvin, Dr. James Thomson, was Professor of Engineering in Belfast Queen's College before being removed to the same post in Glasgow. "Thomson's Arithmetic," a book formerly much used in Ulster, was written by Lord Kelvin's father, and Professor James Thomson was the author of numerous original papers on the currents of atmospheric circulation, &c. President Hamilton and Professor Purser, D.Sc., represented Queen's College, Belfast, at Lord Kelvin's jubilee.

June 17th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Foreign Students in France and Protectionist Measures.

THE tide of *chauvinisme* still flows in a steady and strong stream, and culminated the other day in an interpellation at the Chamber of Deputies, the spokesman being no less a personage than Professor Lannelongue, who is a member of that sapient assembly. The appended cutting will inform the readers of THE LANCET how the question now stands:—

"Dans la séance d'hier de la Chambre des Députés, à la suite d'une question qui lui a été adressée par M. G. Berry à propos des étudiants en médecine étrangers, le ministre de l'instruction publique a fait une réponse conçue en ce sens:

"La loi du 30 Novembre, 1892, sur l'exercice de la médecine en France ayant donné lieu à quelques abus en ce qui concerne l'obtention du diplôme de docteur en médecine par des étudiants étrangers, le gouvernement a pris certaines mesures pour y remédier. Toutefois, il importe de respecter les conventions internationales relatives à cette question.

"On compte actuellement dans les facultés de médecine de France 1054 étudiants étrangers, soit 12 pour cent du nombre total des étudiants en médecine. La majeure partie de ces étudiants étrangers appartiennent à la Russie, à la Roumanie, à la Bulgarie, et à la Grèce, c'est-à-dire à des pays nés plus récemment que le nôtre soit à la vie politique, soit à la vie scientifique. La présence de ces étrangers dans les facultés françaises est la preuve évidente de la hauteur de notre enseignement. Leur fermer la porte de nos établissements serait une faute, car la plupart ne viennent chez nous que pour y étudier et retournent ensuite dans leur pays une fois leurs études terminées.

"Le ministre annonce en terminant qu'il étudie le moyen de délivrer aux étudiants étrangers non pourvus des titres français et ayant terminé leurs études médicales un diplôme spécial de docteur en médecine ne donnant pas le droit de pratiquer en France.

"Après cette réponse du ministre, la question, sur la demande de M. Lannelongue, est transformée en interpellation, et finalement la Chambre adopte un ordre du jour, accepté par le gouvernement, 'invitant le ministre de l'instruction publique à déposer un projet de loi sur la situation des médecins et des étudiants étrangers en France.'"

Let us hope that the matter is buried for the present, and that France will after due reflection deem it wise not to insist on a measure which will have the effect of driving remunerative British and American visitors into Italy, whose Government is far too sensible to do other than welcome foreign medical men and the patients they bring in their train.

Vulvo-vaginitis of Infants.

Considerable divergence of opinion existing as to the true nature of the above-named disease so frequently met with in young female children M. Veillon and M. Hallé have recently made researches thereon in the laboratory of Professor Grancher, the subjects being twenty-one children affected with a vaginal discharge and six apparently healthy children. The clinical study of these cases has led the writers[1] to divide vulvo-vaginitis into two groups. The first variety affects neglected children suffering simultaneously from skin diseases such as impetigo, phthiriasis, and eczema. Here we find in the genito-crural fold, around the clitoridean prepuce and behind the inferior commissure of the vulva, a whitish smegma mixed with a small quantity of turbid serous discharge. On separating the labia majora no secretion is observed to escape from the vulva even when efforts at defecation are made. This slight discharge does not stiffen linen and disappears readily under ordinary cleansing treatment. In the second and most

[1] Archives de Médecine Experimentale et d'Anatomie Pathologique, May, 1896.

common category we have to deal with vulvitis accompanied by purulent discharge staining linen of a green colour. This green discharge is seen on the labia majora and around the clitoris. When the discharge is profuse the pus dries on the labia majora, the inguinal fold, and the surrounding skin as thick crusts. Separation of the labia brings to view a quantity of pus in the neighbourhood of the meatus, the edges of which are inflamed. On depressing the falciform fold that conceals the vaginal orifice the hymen is seen to be red and inflamed. Often a drop of pus obstructs the vaginal entrance; if not, efforts at defecation suffice to expel a certain quantity of green, viscid pus resembling that of acute gonorrhœa. This discharge is persistent, simple measures of cleanliness being incapable of curing it. It is strange, however, that the children suffering from this variety of vulvo-vaginitis utter no complaint. The majority of these latter cases are undoubtedly of gonorrhœal origin, M. Veillon and M. Hallé having almost invariably discovered in the pus Neisser's gonococcus. The usual complications of gonorrhœa may therefore ensue, and appropriate treatment is necessary. In very acute cases the microbe was found in the pure state. In other instances it was associated with the non-virulent micro-organisms normally found in the vagina of young female children. These are, according to the writers, in their order of frequency, the common pseudo-diphtheria bacillus, the club-shaped pseudo-diphtheria bacillus of Weeks, the non-pathogenic streptococcus, and the staphylococcus epidermidis albus. The existence in the vagina in health as well as under pathological conditions of organisms liable to be confounded with Löffler's true diphtheria bacillus should not be lost sight of if an erroneous diagnosis of vulvar diphtheria is to be avoided. The presence of the gonococcus in a vulvar discharge occurring in a child does not necessarily mean that the patient has been subjected to violence, the infection being generally indirect. I myself had occasion to report on a case of vulvitis where the only alterations discernible were a slight swelling and the presence of the smegma referred to above. The mother was persuaded that her child had been tampered with by a man who had been previously convicted of such an offence.

June 17th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Direct Observation by means of the "x" Rays.

THE striking results of Professor Buka which I reported in my last letter[1] have been confirmed by Dr. Levy in a paper read before the Berlin Physiological Society. Dr. Levy, in collaboration with Professor Grunmach, has, moreover, extended the method of direct observation to pathological conditions of the internal organs. In a patient who formerly suffered from pulmonary tuberculosis but had now apparently recovered the calcified tubercles became perceptible as dark-coloured areas in the apices of the lungs, and in a case of arterio-sclerosis the calcified coronary arteries appeared as black stripes in the shadow cast on the screen by the heart.

A New Hypnotic.

In a paper read before the Verein für Innere Medicin, Professor Jolly has given an account of a new hypnotic called pellotin, which is not prepared by chemical synthesis, like the other sleep-inducing medicaments of the present day, but is an alkaloid discovered in a species of Mexican cactus called anhalonium. The natives of Mexico are reported to swallow slices of this plant to which they give the name of "Pellote," and Dr. Hefter of Leipsig has now succeeded in isolating its soporific alkaloid. Pellotin itself is not soluble in water, but its hydrochlorate is extremely soluble. Its physiological action was first tried on frogs and then on mammals, which very soon became unable to stand or perform spontaneous movements, and shortly afterwards an increase of the reflexes was observed, followed by tetanic convulsions. This action of the drug on animals was not identical with that which Dr. Hefter observed in himself, for after taking five centigrammes (three quarters of a grain), he became very drowsy and ultimately fell asleep. The drug was then given by Professor Jolly to a number of patients in the neurological wards of the Charité Hospital in Berlin. The first case was that of a man suffering from alcoholic neuritis who, after an injection of four centigrammes became very drowsy, and one hour afterwards he fell into a sleep which lasted for four hours. Dr. Hefter had observed in himself a diminished pulse-rate and the same symptom was perceptible in this patient, during the first hour of whose sleep the pulse fell to 56 per minute, rising again to 76 before the man awoke. Another patient with multiple sclerosis took five centigrammes during the afternoon, and after half an hour he also slept soundly for several hours. Similar results were obtained in a series of other cases. In patients suffering from tabes the soporific action was equally satisfactory, but the pains returned after they woke. In delirium tremens the effect was less prompt; in one instance twelve centigrammes (equal to one and three-quarter grain) were needed only to tranquillise an excited patient, but no sleep ensued. In twenty cases of different kinds the remedy was given as a hypnotic in the evening. Two centigrammes had no effect, but from four to six were efficacious in producing sleep and no injurious consequences of any kind were observed. Some patients complained of giddiness and declined to take the medicine, but the greater number did not suffer in this way. Professor Jolly says that six centigrammes (equal to about one grain) of pellotin are equal to one gramme (equal to 15½ grains) of trional, or two grammes (equal to 31 grains) of hydrate of chloral. The number of cases is as yet too small to justify the formation of a definite opinion as to the new remedy, but it undoubtedly deserves further trial.

The Sequel of the Langerhans Case.

In THE LANCET of June 6th (p. 1596) I gave an account of the microscopical and chemical analysis of the antitoxin administered to the child of Professor Langerhans, and after a long delay the official report of the post-mortem examination has been published in the *Berliner Klinische Wochenschrift*. The examination was performed by Professor Strassmann and Dr. Mittenzweig, medical officers to the Berlin law courts. Previously to the fatal injection the child had taken his dinner, followed shortly afterwards by some milk and cake. Death took place during a severe fit of coughing, and the necropsy showed that the trachea and bronchi were entirely filled by a grey substance, which by microscopical examination was proved to consist of particles of food, a good deal of the same being still present in the stomach. The uvula was swollen. The medical experts, therefore, declare that the child died from suffocation. They are of opinion that the boy vomited after the injection; and being in a fainting state from the pain of the injection, he was not able to get rid of the vomited matter, but drew it into his larynx in the act of inspiration. They did not find any embolism of air in the pulmonary artery, as was suggested, nor was there any confirmation of the opinion that death had occurred from syncope, and they advised the court not to hold anyone responsible for the child's death. According to the statement of the Control Office the serum was of normal quality and the injection was in their opinion justified by the present state of medical knowledge. The matter is thus at last entirely cleared up, and the unfortunate father will probably now regret that he unnecessarily alarmed the public and aroused a prejudice against a mode of treatment which has proved a blessing to a great many sufferers.

June 16th.

[1] THE LANCET, June 13th, p. 1769.

ROME.

(FROM OUR OWN CORRESPONDENT.)

A Study in Social Criminology.

IN spite of the "Index Expurgatorius" the nexus between physical organisation and moral responsibility attracts successive relays of students in Italy which, for the attention it has bestowed on it throughout, may almost claim the subject as its own. The last and not the least penetrating and practical of the studies in question is that of Signor G. Ciraolo—a barrister by profession and a physiologist by predilection—whose volume entitled "Delitti Femminili a Napoli: Studio di Sociologia Criminale" (Milan: Kantorowicz, 1896) exemplifies skilfully and effectively the advantages of a legal supplemented by a purely scientific training. His researches were chiefly pursued in Naples—in some respects the most depraved city in Europe, rich in types of racial

degeneracy and prolific in the crimes to which each type is prone. The book abounds in illustrative examples of these—narrated with the analytic power of a pleader and the dramatic force of an artist; and if the author sins occasionally in a too facile resort to generalisation, which sometimes indeed looks rather like a trick, he may plead in excuse that his classifications are provisional only—meant to aid the student in grasping an otherwise bewildering wealth of detail. With this qualification the reader will find much in the book that is suggestive, more that is interesting, and most of all that it behoves the student of social science to know, whether it conflicts or harmonises with his preconceived notions.

Balneo-Therapeutics.

The season of hydrological congresses, as it may be called, began on Sunday, the 14th inst., at the Bagni di Porretta, that well-known thermal resort on the Milan-Bologna-Florence line of railway. These gatherings increase annually in importance for the profession as well as the public, concentrating a larger amount of attention on Italy's undeveloped resources in natural mineral waters and showing the leeway she has yet to make if she is to compete advantageously with the frequently less rich but almost invariably better appointed establishments beyond the Alps.

The New Sanitary Works at Naples.

"See Naples and die," says the proverb—true till quite lately in a sanitary even more than in an artistic sense. The fairest city of Southern Europe, bears[1] "the reproach of concentrating in itself nearly every vice of which the sanitary reformer can take cognisance, whether as to water-supply, as to drainage, or as to dwelling-house accommodation." But in the following week you reported at length King Humbert's memorable visit to the work of sanitary rehabilitation already begun, and described the elaborate operations then in progress for supplying the city with pure "acqua potabile," with adequate drains, and with wholesome and attractive dwellings. Since that day, in spite of interruptions and postponements, without which no Italian undertaking can proceed, the beneficent work has been carried forward and another mighty advance in the right direction was scored on the 7th inst., when, in presence of the authorities—legislative, municipal, and sanitary—gathered around the colossal "vasca di raccolta" excavated under Posilipo, was inaugurated the new network for draining the upper and central quarters of the city. This splendid achievement in sanitary construction was primarily the design of the philanthropic citizen Nicola Amore, Syndic of Naples, who did not survive to witness the realisation of his dream, while the engineer Minozzi, guided by the municipal engineer, Gaetano Bruno, conducted it to completion. By it all the effete matters of the city—the refuse and sewage of every kind—are drawn away and from the "vasca di raccolta" (tank of collection), under Posilipo, are conveyed far beyond the suburbs to the desert shore of Cuma. Upper and middle Naples are the quarters thus relieved by the network which runs its channels throughout all the city, the lower quarters of Porto, Pendino, and Mercato excepted. Converging in the main collectors, they all meet finally in the "vasca" aforementioned, whence the "liquid foulness" drags its slow length along, a distance of nearly eight miles, to disembogue at Cuma. At the ceremony of inauguration a brief but lucid description of the works was given by the engineer, Bruno, after which the Royal Commissioner made a short address, and then with three blasts of the trumpet the signal was given to let loose the pent-up sewage. In ten minutes the "fiumana cloacale" (the river of Cloacina) was in motion, carrying with it the *materies* of those maladies which for centuries have put Naples in evil odour even among Mediterranean seaports, and restoring her (let it be hoped) to her earlier and purer self when she was the resort of whatever was most refined and civilised in Imperial Rome.

Italian Surgery at Berlin.

One of the collateral benefits to be derived from congresses is the opportunity they afford the foreign delegates of comparing other institutions and other methods with their own—a benefit of which Italian teachers and consultants have freely and cordially availed themselves. At the jubilee gathering of surgeons lately held in Berlin, Italy was mainly represented by Professor Bottini of Pavia and Professor d'Antona of Naples, names familiar to the profession in the British Isles, particularly that of Bottini for his original monograph[2] on Cavernous Angioma of the Cheek; its Surgical Cure. These eminent clinicians have just conveyed to their countrymen, through the *Corriere* of Milan, their impressions of the Teutonic as compared with the Italian schools, and, so far as teaching is concerned, especially clinical teaching, the note they strike is one of self-humiliation, the prelude (it is to be hoped) of speedy and root-and-branch reform. Take hospitals as an instance in point. At Heidelberg Professor Czerny's clinique includes 300 students and 220 beds. At Naples the analogous clinique of Professor Gallozzi numbers 2000 students and only thirty beds. The other two parallel cliniques at Heidelberg, with some sixty students, have over 200 beds, and at Naples Professor d'Antona, addressing about 500 students, has for purposes of clinical illustration not more than twenty beds. Even in more modest schools the superiority of Germany to her Latin sister is not less overwhelming. Göttingen, in the surgical clinique of Professor Franz König, has 130 beds for some eighty students, and Professor Bottini, in the school of Scarpa and de' Porta, gives lectures to 250 students of the fifth and sixth course with but thirty-seven beds. *Mancanza di quattrini* (want of money), which in Italy explains most things, is not wholly responsible for the clinical inadequacy of her schools. For one thing, such funds as she possesses are too often misapplied, marble and granite absorbing in hospital construction the resources which should be expended on the multiplication of wards and their appropriate equipment. In Berlin the Urban Hospital accommodates 600 patients provided with every hygienic and clinical requisite, and all for two and a half million lire (£100 000). At Genoa, on the other hand, the Galliera Hospital, at a cost of seventeen millions (£680,000), is a splendid palace with but 200 beds "esposti," says Professor Bottini, "da un lato ai venti del mare, dall' altro ai venticelli ..... delle latrine" (exposed on one side to the sea breezes, on the other to the fumes of the ..... privies). Even the Policlinico at Rome (the creation of Baccelli) is not exempt from the criticism that on its fine artistic *ensemble* there has been lavished an amount of money which should have had its appropriate destination in wards and other clinical appointments worthy of the chief hospital of the capital of United Italy. It is to be hoped that Professor Bottini will follow up his "confronti" (contrasts) between German and Italian medical education, if only to convince the rather apathetic public, and thereafter the legislature, that exceptionally fine medical aptitudes and the highest aspirations towards professional efficiency will not attain their end without the object-lessons and the experience which Germany, and still more the British Empire, afford in their hospitals.

The Mediterranean Squadron in Italian Waters.

THE LANCET is known and appreciated in the British navy for its vindication of the best interests of the service, primarily, of course, the medical and sanitary interests, and secondarily those interests indissolubly associated with the prestige of the British flag. From foreign capitals (which might have been expected to have been better inspired) there have returned to us the messages of correspondents representing them in Italian seaports, messages reflecting on the conduct of the visitors from the Mediterranean squadron. The *Popolo Romano*, an authoritative Roman journal well entitled to speak for the name it bears, in drawing attention to these messages, takes occasion to characterise them as the "solite esaggerazioni di corrispondenti" (the usual exaggerations of correspondents), and gives a very different impression of the conduct in question as produced in Rome especially. That impression, I may add from personal knowledge, is shared by Italians of all ranks and creeds, from the humbler strata of society up to the Quirinal and the Vatican.

The Italian Red Cross.

By Royal decree there has just been nominated a commission to settle, if possible, in an affirmative sense, the following proposals: (1) the admission of military men, on unlimited leave (*congedo illimitato*), into the *personnel* of the Red Cross; (2) that the said *personnel* shall have a military discipline and jurisdiction; (3) that the same *personnel* shall be entitled to pensions on the ground of wounds or infirmities incurred in time of war or even in time of peace on occasions of exercises (autumn manœuvres and such like); (4) that measures be adopted to prevent the abuse of the

[1] THE LANCET, June 22nd, 1889, p. 1261.

[2] THE LANCET, Sept. 20th, 1890, pp. 612-14.

emblem and the name of the Red Cross; and (5) that the various societies of aid to the sick and wounded shall, in time of war, be dependent on the Red Cross Association. The commission is a strong one, including a highly competent representative of the medical arm.

June 15th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The Coronation Festivities and the Disaster at the Popular Fête.

THE series of elaborate festivities with which Russia has marked the advent to the throne of her new Emperor are now drawing to a close. As all the world by this time knows, the State entry into Moscow on May 9th (21st) and the Coronation itself on the 14th (26th) have been followed by nearly a fortnight's general rejoicing. The ancient city has decked herself in all her best, and with street decorations and illuminations of quite extraordinary beauty has made a brave show, and has provided such a background for the pageants that have been enacted within her walls as probably few other cities could provide. With one exception the whole series of ceremonials, the more popular of which have been witnessed by hundreds of thousands of spectators, Russian and foreign, have passed without serious accident. It was inevitable that many of these ceremonials should have caused extreme fatigue to the principal actors. The most trying of all was the Coronation service itself. A service lasting some three hours was followed by the formal reception of congratulations and an Imperial banquet in the old dining hall of the Kremlin Palace. When it is remembered that the Emperor and Empress had been fasting since the previous midnight, in obedience to the injunctions of the Church, and that the banqueting-hall was not reached until nearly three o'clock; when it is further remembered that they had for many hours been standing under the enormous weight of the Imperial robes of gold tissue and ermine, it is scarcely surprising that their Majesties showed clear signs of physical exhaustion, to which the mental strain and the extraordinarily impressive and significant nature of the ceremonial they had passed through must have contributed in no slight degree. Fortunately, however, no serious results followed, and the Emperor and Empress, though looking tired, appear to be in excellent health and have borne their share in the never-ending festivities of the past fortnight with a quiet dignity and grace which have delighted everybody. The one exception to the success of all these *fêtes*, to which I have already referred, was, unfortunately, a very terrible one. It is not easy yet to write quite calmly about the catastrophe of last Saturday, details of which will have already appeared in the English papers. The dreadful sight in the field itself, which in parts was literally heaped with dead bodies, the gruesome string of firemen's carts laden with corpses which met one on the way to the *fête*, and were the first intimation one had of any disaster having occurred, and subsequently the painful scenes at the cemetery when the victims were buried, of necessity made such an impression upon all who beheld these scenes as to for the moment blot out the recollection of the previous scenes of brilliant gaiety and to replace the bright sunshine with a most hideous and depressing gloom. It is perhaps too early yet to apportion blame for this disaster, but it is clear to the most superficial observer that "some one had blundered." To build a long string of wooden huts (from which the Emperor's presents of an enamelled mug and a handkerchief full of eatables were to be distributed to the people) within a stone's throw of a long ditch, the bottom of which was dug out into deep holes from eight to twelve feet deep,—to do this when it was expected that at least 400,000 peasants would flock to the field from Moscow, and consequently have to cross this ditch, which was on the city side of the field, was to court disaster. When at about seven o'clock in the morning a sudden rush was made towards the huts, and a clamour arose that the gifts should be given out, what might have been foreseen happened. Those near the ditch fell into it. Hundreds of thousands pressed on over them. For those who fell to rise again was impossible, and it was even impossible for others to help them. Peasants themselves told me they could feel they were trampling over a field of struggling human beings, but so tightly were they themselves packed that they were unable to move a finger. A second death-trap existed in an old disused well, which had been dug in 1891 for the French Exhibition, which was held on the same plain. It had been boarded over and the boards covered with sand, but the boards were not strong enough to bear the dense crowds, and some half hundred unfortunate peasants met with a horrible death in this pit. The total number of victims is between 2500 and 3000. The terrible disaster is doubly regrettable, not only for itself, but for the fact that it has led many to blame those who are in no sense to blame. The Emperor himself is held responsible by the common people, who are accustomed to lay everything "upon the king." Even a better educated class are murmuring loudly and deeply, and the impression the disaster has made will take a very long time to efface, if, indeed, it will ever be effaced. It is the more unfortunate as the police and military arrangements at all the other functions, at some of which the crowds must have been nearly as great as those of last Saturday, have been admirable, and the good nature on both sides quite striking. But for this one dreadful exception the festivities marking the Coronation of Nicholas II., for the success of which everything, the weather included, seemed to have coöperated, would have been one unbroken memory of delight and enjoyment.

The International Medical Congress.

The programmes of the different sections are now in preparation, and the letters of invitation to those who will be asked to read papers are being printed. All the foreign committees have now been formed with the exception of the English. The executive committee have invited Sir James Paget to undertake the formation of the English committee, but his reply has not yet been received.

Moscow, May 24th (June 5th).

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

Chronic Endometritis as a Precursor of Carcinoma Uteri.

DR. BACKER, after having examined the notes of 705 cases of uterine cancer which have been under the care of Professor Kézmarszky at the Budapest I Maternity, was able to infer that women suffering from chronic endometritis were specially liable to contract carcinoma of the uterus. He pointed out that the occurrence of this disease was apparently in connexion with such forms of chronic endometritis as could most frequently be traced to troubles of the puerperium. In corroboration of this view he draws attention to the well-known facts that uterine cancer is more frequent with women who had borne children previously, and that it is often to be found among the poor, who are more likely to neglect uterine troubles. Moreover, uterine catarrhs of old standing figure nearly always in the history of the case. A good lesson to be derived from Dr. Bäcker's able paper is that chronic endometritis should never be neglected, as its thorough and effective treatment might lead to the prevention of the dreaded disease.

Public Health in Hungary during 1895.

The official annual report on public health has just been issued by the Home Office. It shows that the condition of the country from a health point of view was satisfactory as compared with former years. In 1895 162 660 men suffered from zymotic diseases, of whom 15·7 per cent. died; while in 1894 166 424 infectious cases had been notified, with a death-rate of 22 per cent. This amelioration was due partly to the steady spread of sanitary measures and partly to the improved methods of combating the diseases. An increase of morbidity and mortality from small-pox must be noted. It is very interesting to record that of 4762 vaccinated persons who were attacked by small-pox 548 (11·5 per cent.) died, whereas of 2212 non-vaccinated persons 923 (47·7 per cent.) succumbed to the disease. The number of vaccinations exceeded by 30,448 the total of the preceding year, this surplus being chiefly due to re-vaccination. Vaccination was generally effected with fresh animal lymph, humanised lymph having been used in 7·2 per cent. only. As regards diphtheria the average mortality showed 35·5 per cent., against 53·1 per cent. in 1894 and 43·04 per cent. in 1893. An institution for the production of antitoxic serum has been created under the direction of Professor Preisz and yielded 350,000 doses of serum. Serum of Hungarian and foreign make has been distributed gratuitously among the poorer

class and consequently employed on a large scale. The results of this treatment obtained throughout the whole country are not ready yet for publication, but will be shortly.

The Housing of the Working Classes.

This question, which has been much neglected in the Hungarian metropolis, was recently made the subject of careful study and consideration by Dr. J. Farkas. He showed the inefficacy of the spare measures which had been adopted by the State Government and the town council of Budapest in comparing the alleged results with those obtained in Great Britain, France, Belgium, and the United States. His paper gives a full account of the methods which ought to be employed with a view of improving the state of affairs and is well worthy of perusal by those concerned.

June 9th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Adelaide Medical School and Hospital.

MATTERS have reached a climax in the affairs of the Adelaide Medical School and Hospital and the result is that the students are betaking themselves to Sydney and Melbourne for the clinical instruction which they despair of getting in their own city. First of all the South Australian Government withdrew the annual grant to the school and now the honorary staff at the hospital has resigned in a body so that no clinical teaching is possible. The work at the hospital is carried on by the resident staff with some assistance from a few practitioners who are in the Government service. Patients naturally refuse to go into the hospital and such as are able are leaving. It was hoped that some arrangement would be possible and matters might be smoothed over, so that the members of the honorary staff could withdraw their resignation, but the Government has remained obdurate and is endeavouring to meet the difficulty as far as the hospital is concerned by advertising for a resident surgeon at £400 per annum, who is to be capable of undertaking all the surgical and gynæcological work, and a resident medical officer at £300. No one in South Australia will apply, the whole profession supporting the staff, but the Government hopes that in some other country, where the facts are not so well known, some practitioners may be found so destitute of *esprit de corps* as to take these appointments. All right-thinking members of the profession in the colonies now regard the differences between the Government and the staff—originating in a small question of nursing discipline, as already described—as a fight of might against right, and trust that whatever may be thought as to the expediency of the somewhat Quixotic action of the members of the staff in the first instance they will now receive the support of the profession universally in their self-sacrificing struggle against the ignorant and insulting tyranny of the Government.

Women as Resident Medical Officers at the Melbourne Hospital.

According to the rules of the Melbourne Hospital the resident medical officers are appointed annually from the students of the hospital, according to their place in the class lists of the Melbourne University. A few years ago a woman was among the first in the class lists and applied for the position but was ruled ineligible as she was not a full student of the hospital, having done some of her clinical work at the Alfred Hospital. This year two ladies, Miss Gamble and Miss Greig, are eligible according to the rule, and, notwithstanding much opposition, have just been appointed to the positions. The honorary staff, strange to say, was not consulted in the matter. The new medical officers will certainly find plenty of difficulties, as many of the honorary staff, the matron and most of the nurses, and the students are opposed to them. Miss Greig has been placed in charge of the casualty room, and had a lively experience the first night she was on duty, treating cases of alcoholism and assault, &c., and many doubt whether she will be able to stand the strain of the position under the circumstances.

Prevalence of Typhoid Fever: the Cold Bath Treatment.

Typhoid fever continues to be very prevalent both in Sydney and Melbourne. In the former metropolis the cases have chiefly occurred in the thickly populated but low-lying districts which are not yet sewered, while those parts connected with the sewerage have escaped. Mr. Kendall, medical officer to the Sydney Water and Sewerage Board, attributes the outbreak in part to the fact that in the districts where it is most rife the houses are built on made soil contaminated by leakage from cesspits and pan-closets; in addition the rainfall has decreased, only amounting to nine inches as compared with sixteen inches for the corresponding quarter of last year, and the average range of temperature has been much higher. The suburbs along the Illawarra line, which are very low-lying, with no drainage, are most affected. In Melbourne sewerage work is in progress, and many attribute the prevalence of typhoid fever to the stirring up of the contaminated soil by the excavations for the drains. Public attention has been forcibly directed to the cold bath treatment of typhoid fever by a correspondence on the subject in the Melbourne daily press, a correspondence deprecated by many as affording a means of cheap advertisement to such practitioners as chose to make use of it and as also likely to do more harm than good from a public point of view. The physicians of the Melbourne Hospital in particular have been blamed for not using the Brand method more largely, and their results have been contrasted with those obtained in the Brisbane Hospital where it is used in every case. It has been pointed out, in reply, that the comparison is unfair, the Melbourne Hospital receiving a large number of patients in the last stages of the disease, when death is almost inevitable under any treatment and the Brand method is inapplicable. It has also been stated that the improvement in the mortality at Brisbane Hospital since the introduction of the bath treatment cannot fairly be said to be due entirely to the use of that method, as the mortality in private cases not so treated has also improved, and the type of the disease has been much milder since 1887, when assisted immigration ceased, the acclimatised population apparently suffering much less severely than did the newly arrived immigrants.

Annual Meeting of the New South Wales Branch of the British Medical Association.

The annual meeting of the New South Wales Branch of the British Medical Association was held on March 27th, and the following were elected as office-bearers for the ensuing year. President: Dr. Sydney Jones. Vice-President: Mr. Clubbe. Councillors: Dr. Thring, Dr. Knaggs, Dr. Jenkins, Dr. Scot-Skirving, Dr. Crago, Dr. Worrall, Dr. Coutie, Dr. Quaife, Dr. Fiaschi, Dr. Chisholm, Mr. Newmarch, and Dr. Mullins. The retiring President, Dr. E. J. Jenkins, read an address, in which, after feelingly alluding to the death of Dr. Huxtable, the late secretary of the branch, he referred to the relation of the profession to friendly and medical aid societies, and congratulated the profession in New South Wales on the successful stand it had taken. The proposal to register midwives was strongly condemned, and the proposal of Dr. Sydney Jones to establish farm hospitals in the country for cases of phthisis was warmly approved. The need for an Inebriates Act was noted and also of some means of preventing the indecent advertisements of abortionists with which the newspapers abound.

Scurvy in Infants.

From an interesting paper read before the Medical Society of Victoria by Dr. A. J. Wood it would appear that scurvy is not at all an uncommon affection of Australian children, though not always recognised as such. He records seven cases in his own practice and in most the food was either condensed milk or concentrated or sterilised milk. In one case fresh milk was given, but in a very diluted form. The prolonged heating of condensed, concentrated, and sterilised milk destroys its anti-scorbutic properties. All the cases quickly recovered when given fresh foods, fresh milk, and meat juices.

Obituary.

CHARLES PAGET BLAKE, M.D. EDIN., F.R.C.P. LOND.

WE regret to announce the death of Dr. Paget Blake, R.N., which occurred at his residence, Alverstoke Vale, St. Marychurch, on June 12th. The deceased was born at Alverstoke, Hampshire, in 1819, and was the son of Admiral G. C. Blake, naval gentleman usher to the late Prince Consort. He was educated at Bishop's Waltham School and Edinburgh University, where he graduated M.D. in 1840. In the same

year he entered the navy and as assistant-surgeon on H.M.S. *Cornwallis* served in the operations on the coast of China and up the River Yang-tse-Kiang, landing with the naval brigade at the capture of Woosung, Chappos, and Chin-Kiang-Foo, for which he received the China medal. In 1856 he retired from the navy and settled in Torquay, where he was in practice for a considerable period. He will be best remembered in Torquay for his gift of curiosities from all parts of the world to the town. He was on St. Marychurch local board and for two years had been a guardian of the poor and chairman of the Moretonhampstead Convalescent Home. He took an active interest in the various charitable and philanthropic societies of the town. He was one of the original trustees of St. John's Masonic Lodge, Torquay, of which he was one of the oldest members. In 1874 he was elected a Fellow of the Royal College of Physicians of London. The funeral took place upon June 16th.

THOMAS ALEXANDER MITCHELL, L.R.C.P., L.R.C.S. IREL.

MR. T. A. MITCHELL, who died on May 5th from the effects of a fall while running to catch a train, was a well-known practitioner at Southend, where he resided, and possessed a reputation as a skilful surgeon. He received his medical education at Dr. Steevens' Hospital, and previously to taking up his residence at Southend had for many years a large practice at Catford, near Lewisham, and was much respected by all his patients. Mr. Mitchell held several assurance appointments and under the Contagious Diseases Act, 1879-80, was surgeon for Woolwich. His contributions to medical literature included "Early Escape of Liquor Amnii," "The Growth of Hair after Death," and "Secretion of Milk in the Male," the latter appearing in the columns of THE LANCET in 1885. Always a kind-hearted and amiable man, with a strong sense of duty, the death of Mr. Mitchell in his forty-eighth year will be lamented by a large circle of friends and patients.

SIR THOMAS GALBRAITH LOGAN, K.C.B., M.D. GLASG., F.R.C.P. LOND.,

HONORARY PHYSICIAN TO THE QUEEN.

THE Army Medical Department has lost in Sir T. Galbraith Logan a former Director-General and an officer of long and distinguished service. Sir T. G. Logan died on the 11th inst. at the advanced age of eighty-seven years. He was a man of singularly kind and courteous manner and much beloved. He was the eldest son of an army surgeon and was born in 1808, educated at York and Ayr, and graduated as M.D. Glasg. He entered the Army Medical Department after taking his degree at Glasgow and was appointed an assistant surgeon in 1830. As a surgeon, which rank he obtained in 1842, he served in the Sutlej Campaign of 1845-6 with the 53rd Regiment, and was present at the affair of Buddiwal, and took part in the actions of Aliwal and Sobraon, for which he had the medal and one clasp. Appointed a Surgeon-Major in 1852 he went out to the Crimea in 1855, serving at the Siege of Sebastopol, and was present at the taking of the Quarries on June 7th, at the assault a few days later, and, as principal medical officer of the Highland Division, at the final assault on Sept. 8th. For these services he was awarded the medal with clasp, the Fifth Class of the Medjidie, and the Turkish medal. He reached the rank of Inspector-General in 1859, was Director-General of the Army Medical Department from 1867 to 1874, being created a K.C.B. (Military Division) in 1869, and was placed on the retired list in April, 1874. He had been honorary physician to the Queen from 1859, and he was a Fellow of the Royal College of Physicians of London, from 1867 and hon. Fellow of the Royal College of Surgeons in Ireland. Sir Thomas Logan, who married in 1858, was also a Fellow of the Royal Geographical Society, and on the Royal Patriotic Fund Commission. The deceased officer was a well-read man, an excellent linguist, and a very genial, pleasant companion. He had travelled a great deal and seen much of the world, and of the European continent in particular. It is recorded of him that he won a prize instituted by the officers of his regiment in a spirit of comradeship and pleasantry for never having lost his temper during a stipulated time mutually agreed upon. In spite of his personal predilections being in favour of the regimental system, of which he had such a long and pleasant experience, he became convinced that the so-called unification or general system was the right, as well as the only practicable, one for modern warfare, and he consequently became a strong advocate for the present system. His courteous bearing and manner in official life and on committees, with a strong dash of common sense, gave him a good deal of influence with those with whom he came in contact and he was almost universally and deservedly liked.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Leipzig:* Dr. O. Fischer has been appointed Extraordinary Professor of Medical Physics. Dr. E. Krückmann has been recognised as *privat-docent* in Ophthalmology.—*Prague* (German University): Dr. P. J. Pick has been promoted to the Professorship of Dermatology.—*Rome:* Dr. S. de Sanctis has been recognised as *privat-docent* in Mental Diseases, Dr. Faraci as *privat-docent* in Otology and Laryngology, and Drs. Albanese and Dutto in Physiology.—*Turin:* Dr. L. C. de Martiis has been recognised as *privat-docent* in Mental Diseases. *Vienna:* Dr. Lott has been recognised as *privat-docent* in Midwifery and Gynæcology, and Dr. Mracek as *privat-docent* in Dermatology.

MR. and MRS. LEOPOLD DE ROTHSCHILD have sent a cheque for £20 towards the charitable work of Ings House Nurses' Coöperation, 81, New Bond-street, W.

THE Nursing Exhibition at St. Martin's Town Hall was closed on Saturday evening by the presentation to Mrs. Bedford Fenwick of an album containing press notices concerning the exhibition.

ROYAL METEOROLOGICAL SOCIETY. — The last meeting of this society for the present session was held on Wednesday evening, the 17th inst., at the Institution of Civil Engineers, Westminster, Mr. E. Mawley, F.R.H.S., President, in the chair, when Mr. H. Harries read a paper on Arctic Hail and Thunderstorms.

NEUROLOGICAL SOCIETY OF LONDON.—A meeting will be held at Dr. Waller's Laboratory, Weston Lodge, 16, Grove End-road, N.W. (opposite the end of Abbey-road), on June 25th, at 8.30 P.M., when Dr. Waller will give a demonstration of the Action upon Isolated Nerve of Anæsthetics, Sedatives, and Narcotics.

AT a general court of the Governors of Addenbrooke's Hospital, Cambridge, held on Wednesday last, Professor Clifford Allbutt was elected a lecturer on clinical medicine and Sir George Humphry was elected a lecturer on clinical surgery, the object of this being to bring the medical teaching in the University into closer relations with the clinical teaching at the hospital.

LITERARY INTELLIGENCE. — Messrs. Baillière, Tindall, and Cox will publish shortly a new work on "Gout and Goutiness," by Dr. Wm. Ewart; "The Objects and Limits of Operations for Cancer," by Professor Watson Cheyne; a translation of the forthcoming "Atlas of Pathological Histology," by the leading German professors, edited by Dr. Arnold Brass; this work will be illustrated with over 1000 fresh microscopical specimens in colours, the translator being Dr. Robert A. Young of the Middlesex Hospital. They also announce Professor Jakob's "Hand Atlas of the Nervous System," translated by Dr. Collins, with seventy-eight coloured plates; and Professor Lehmann and Professor Neumann's "Hand Atlas of Bacteriology," illustrated with sixty-three coloured plates.—Messrs. P. S. King and Son, King-street, Westminster, will publish shortly, providing a sufficient number of subscribers is obtained, a general index to Hansard's Parliamentary Debates from 1830 to 1891. The plan on which the index is to be constructed is an excellent one, giving the names of speakers and the debates they took part in, together with the subjects of debates, Bills, motions, &c., with dates and numerous cross references. An exceedingly useful feature of the work will be the part of the index relating to historical declarations and phrases. The complete index will be supplied according to binding from £10 10*s.* to £11 10*s.*

MR. GEORGE STEVENS of Norton, Bury St. Edmunds, will receive for the eleventh time the vaccination grant from the Local Government Board for successful vaccination in the third district of the Stow Union.

THE annual meeting of the Association for the Oral Instruction of the Deaf and Dumb will be held at 11, Fitzroy-square, W., on Thursday, June 25th, at 3.30 P.M., when a short illustration of the system will be given and the prizes will be distributed.

PRESENTATIONS TO MEDICAL PRACTITIONERS.—Mr. John Powell, L.R.C.P., L.R.C.S.Edin., of Barry, near Cardiff, has received from the Barry Railway ambulance class in connexion with the St. John Ambulance Association a silver-mounted walking-stick for his gratuitous services as lecturer.—Dr. George Middlemiss of Darlington has been the recipient of a handsome silver-mounted ebony walking stick, suitably inscribed, from the members of the Darlington District Class of the North-Eastern Centre of the St. John Ambulance Association, as a slight recognition of his services as the Class Instructor.

THE DIFFUSION OF SMALL-POX.—The occurrences of small-pox in and around the metropolis continue to be very trifling at the moment, and in the home counties the disease shows but little evidence of spreading. The guardians of the Maidstone Union have been led by the occurrence of small-pox on a small scale in the district to adopt a resolution to the effect that all the children attending the public and private schools in the town of Maidstone shall be examined during school hours by the public vaccinator to ascertain whether they have been vaccinated. It will be interesting to hear what the school authorities have to say to the resolution in view of the attitude taken at some other places on the same subject. Members of the board took exception to the motion on the ground that the public vaccinator would have no power to carry out the wishes of the guardians without the consent of parents. Moreover, the question of entry upon school premises would be not unlikely to arise. It is a great pity that vaccination should have been so long neglected in the union, for it is said that there are now 3000 unvaccinated children in Maidstone alone. Examination of children under these circumstances and in face of these facts will avail little unless the guardians supplement their present motion by a determined attitude towards defaulters. The small-pox data coming from Gloucester show that the cases are falling off again in amount in that city. Last week the new cases recorded were only 25, as compared with numbers for the preceding four weeks reaching 84, 47, 42, and 56. Up to Thursday, June 11th, the total of small-pox cases during the present epidemic was 1936. In the week ended last Saturday the registered deaths from the disease of persons belonging to Gloucester were 8 in number, as compared with 17 in each of the two preceding weeks. In the seven days ended the 11th inst., the discharges from the small-pox hospitals were 28, and the admissions 10 in the same period. All round, therefore, the city is in brighter case than for a long time past. Much interest was manifested locally last week by reason of the proceedings against Mr. E. H. Spring, pastor of the East End Tabernacle, in respect of his having wilfully exposed himself in a public vehicle whilst in an infectious condition consequent upon a mild attack of small-pox. The decision of the Bench was against the pastor, who was fined £5 and costs, a second charge of wilful exposure of himself whilst suffering from small-pox being withdrawn on payment of costs. The evidence forthcoming as to the period of infectivity of small-pox attacks was very diverse, but strongly against the defence set up that the defendant was in a condition to mix with others without danger of spread of infection. More proceedings were last week taken against defaulters under the Vaccination Acts at Gloucester, and a case was also before the court in which a man had failed to notify cases of small-pox in his house. Six cases of small-pox have occurred in one household at Kerne Bridge, near Ross, comprising a man, his wife, three children, and a male lodger. The cases are supposed to have been imported from Gloucester. There is no isolation hospital accommodation and a special nurse has been engaged to look after the patients, the house being isolated and every precaution taken to prevent the spread of the disease. A fresh case of small-pox has quite recently developed at Bridgend, just as the medical officer of health had hoped to be able to certify that the town was free from the disease.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Factory and Workshop Legislation.

THE Home Secretary has had prepared a Bill consolidating the various Factory and Workshop Acts which at present give rise to so much perplexity and uncertainty, and his hope is to be able to introduce it early next session.

Lamp Accidents.

The Select Committee of the House of Commons on petroleum and petroleum lamp accidents is still pursuing its inquiry. It has been at work during two sessions of Parliament, and so great is the pressure of evidence that it is doubtful whether the inquiry can be completed and the report of the Committee prepared before the end of the present session. Most interesting evidence was given at a recent sitting by Professor Mendeleeff of the University of St. Petersburg, who, of course, is a recognised authority on all matters relating to petroleum. He attributed the danger of fire and explosion to the presence of too much benzine in the oil, and said that by the separation of it a mineral oil could be produced which would be no more dangerous than vegetable oil, the benzine separated being sufficiently valuable to cover the cost of the process. In Russia, he explained, the Government are most anxious to raise the flashing point, and with that view a heavier excise duty is put upon low than upon high flash oil. Not only so, but the Government have offered a premium for a lamp which will burn satisfactorily with oil of a high flashing point and have succeeded in getting one which so burns with oil of a flashing point of 200° F. Professor Mendeleeff admitted that high flash oil in ordinary lamps smokes badly, throws off an evil smell, and does not give a good light; but at the same time he expressed the opinion that the statutory flashing point, which in this country is 73° F., should be raised to at least 100°.

Food Products Adulteration.

The Select Committee of the House of Commons on this subject has arranged to meet next week to begin the consideration of a report which has been drafted by the Chairman, Mr. T. W. Russell.

HOUSE OF COMMONS.

THURSDAY, JUNE 11TH.

Treatment of Imbeciles in Ireland.

Mr. Engledew asked the Chief Secretary to the Lord Lieutenant of Ireland whether the Government had decided what steps they intend taking with regard to the recommendation made by the Inspectors of Lunatics and Commissioners of Control in the report dated Lunacy Offices, Dublin Castle, Jan. 8th, 1896, as to the great want existing in Ireland of a national institution for the training and education of idiot and imbecile children, in order that these classes might be removed from what the report of the Commission describes as the neglect and poverty of their own homes and from the contaminating influence of association with the adult inmates of asylums and workhouses.—Mr. Gerald Balfour replied that he was aware of the views expressed by the inspectors of lunatic asylums on the subject of providing State aid towards the establishment of an institution for the training and education of idiots and imbeciles in Ireland. The matter was one which had his sympathetic consideration, and he hoped to be able at some time to introduce legislation dealing with it.

The Dangers of Factory Labour.

Mr. Schwann asked the Secretary of State for the Home Department whether his attention had been called to the statements of various inspectors (in the recent report of Her Majesty's Chief Inspector of Factories and Workshops) that proper precautions were still not taken in indiarubber works to protect the workers, often women and girls, from the pernicious effects of sulphurous fumes, which cause various illnesses, nausea, and even paralysis; and also to the statement in the same report as to the absence in some manufactories of hats, of suitable fans, and other means of ventilation, to prevent the entry into the lungs of the workers of particles of fur and dust given off in the fur-blowing processes; and whether he had power, and would exercise it with renewed energy, to cause the proprietors in both industries to take every precaution to obviate the highly deleterious effects of these operations.—Sir Matthew White Ridley said he had seen the statements of Her Majesty's inspectors. Both points were now under the consideration of the Committees on Dangerous Trades, and when he received their reports he would consider what further precautions might be necessary.

FRIDAY, JUNE 12TH.

Salvation Army Shelters.

Dr. M'Donnell asked the President of the Local Government Board whether his attention had been drawn to the reports of Dr. F. J. Waldo, medical officer of health to St. George-the-Martyr, Southwark, which stated, besides other matters, that on the occasion of a night visit to the Blackfriars Salvation Army Shelter, the air therein was not only dangerous to health but also to life itself; and whether the Government would make provision so that Salvation Army and other night refuges of a similar nature be placed within the purview of the Common Lodging Houses Act.—Mr. Chaplin replied that he was aware of the report of Dr. Waldo with reference to the Blackfriars Salvation Army shelter. On the night in question, when Dr. Waldo reported that the shelter was overcrowded so as to be dangerous to health and to life itself, there were 1031 inmates of the shelter. Proceedings in consequence were taken by the vestry of the parish and an order of prohibition of the overcrowding was made by the magistrate, who considered that 550 should be regarded as the limit of accommodation. Subsequently, an application was made to the High Court, with a view to the order of prohibition being quashed. A rule *nisi* for a *certiorari* was granted, but after argument the rule was discharged. The decision

of the High Court showed that the shelters were subject to the provisions of the Public Health (London) Act as regards overcrowding, and that those provisions could be enforced in the case of a shelter in like manner as in the case of overcrowding in a dwelling-house. The existing law was, therefore, adequate to meet the case of overcrowding in these shelters, and it was not necessary for this purpose that it should be provided by legislation that the shelters should be common lodging houses.

MONDAY, JUNE 15TH.

Village Water-supply.

Mr. Jeffreys asked the President of the Local Government Board whether the parish council of any parish had power to clean out or enlarge the public pond in the village in order to obtain a better supply of water for the parish, and whether the parish rates could be applied for this purpose; and if the parish council had not the power to do this what authority had that power.—Mr. Chaplin replied that a parish council had power to utilise any well, spring, or stream within the parish and to provide facilities for obtaining water therefrom if they did not interfere with the rights of any corporation or person, but whether this power would enable them to execute works of the kind referred to in the question must depend on the circumstances of the particular case. A rural district council had full power to do any necessary acts to provide a supply of water proper and sufficient for public and private purposes, and in order to obtain a better supply of water for a parish in their district they might clean out and enlarge a public pond if they did not interfere with the rights of others.

Sanitary Accommodation in Mills.

Mr. Schwann asked the Secretary of State for the Home Department (1) whether his attention had been drawn to the statement by the women inspectors (in the recent report of Her Majesty's Chief Inspector of Factories and Workshops) that they criticise most unfavourably the sanitary accommodation provided in Lancashire and Yorkshire in many mills, and complain that the inspectors had no power to enforce a standard of decency as well as of cleanliness, sanitary arrangements being often without regard to privacy or propriety; (2) whether he was aware that England was the only great industrial country in Europe which had no clause in its factory legislation requiring general propriety as well as health in these arrangements; and (3) if he would undertake that in any future factory legislation to be undertaken by the present Government special regard would be paid to this point.—Sir Matthew White Ridley replied: I have seen the statements referred to in the question; but at the same time the inspectors state that in many cases, on the defects being pointed out, improvements have been effected. With regard to the second and third paragraphs of the question, the hon. member appears to have overlooked the provision made by Section 35 of the Act of last year that factories and workshops shall be provided with suitable as well as sufficient accommodation. It is too soon at present to judge of the effect of that section, which only came into force at the beginning of this year, but it appears to me to be adequate for the purpose, and in view of it I cannot agree that England is behind other countries in its legislation in these matters.

The Grant for Lunatics.

Mr. Chaplin, in reply to Mr. Ashton, said he had received a large number of communications on the subject of extending to workhouses the 4*s.* grant per week for lunatics now given to lunatic asylums and had given careful consideration to the matter. Nothing, however, could be done without an alteration in the law, and at present he was not prepared to propose legislation with regard to it.

TUESDAY, JUNE 16TH.

The Army Medical Department.

Dr. Farquharson asked the Under Secretary of State for War whether having regard to the paucity of candidates at the last examinations for commissions in the Army Medical Department, it was proposed to issue a new warrant remedying the grievances of the officers of that Department and, if so, whether the promulgation of such new warrant might be expected before the next examination in August.—Mr. Powell Williams replied on behalf of the Under Secretary, saying that the Secretary of State had the whole question of the paucity of candidates for the medical staff under his consideration. Whether it would result in the issue of a new warrant and, if so, when that warrant would be issued he could not at present say, but the matter would not be lost sight of.

BOOKS, ETC., RECEIVED.

ALCAN, FÉLIX, Paris.
Recherches sur l'Épilepsie, l'Hystérie et l'Idiotie. Compte-Rendu de 1895. Par Dr. Bourneville. Vol. XVI. 1896.

BAILLIÈRE, J. B., ET FILS, Paris.
L'Antisepsie dans la Pratique de la Chirurgie Journalière. Par Dr. E. Nicaise. 1896.
Traité de Chirurgie Clinique et Opératoire. Par A. le Dentu et P. Delbet. Tome deuxième. 1896.

BAILLIÈRE, TINDALL, AND [illegible], London.
Chemical Notes and Equations, Inorganic and Organic. By G. H. Gemmell, F.I.C., F.C.S. 1896. Price 5*s.*
Aids to Medicine. Part II., III., IV. By Norman Dalton, M.D. Lond., F.R.C.P. 1896. Price 4*s.* 6*d.*

BATTAILLE ET CIE, Paris.
Travaux de Neurologie Chirurgicale, 1895. Par A. Chipault. 1896.

BLACK, ADAM AND CHARLES, Soho-square, London, W.
Strathpeffer Spa, its Waters and Climate. By R. Fortescue Fox, M.D. Lond. Third Edition. 1896. Price 2*s.* 6*d.*

CHURCHILL, J. & A., Great Marlborough-street, London, W.
A Manual of Botany. By J. R. Green, Sc.D., F.R.S., F.L.S. Vol. II., Classification and Physiology. 1896. Price 10*s.*
The Pathology of the Contracted Granular Kidney and the Associated Cardio-Arterial Changes. By Sir George Johnson, M.D. Lond., F.R.C.P. Illustrated. 1896. Price 4*s.*

DOWNEY AND CO., York-street, Covent Garden, London, W.C.
The Great Famine in Ireland and a Retrospect of the Fifty Years 1845-95. By W. P. O'Brien, C.B. 1896.

DOIN, OCTAVE, Paris.
Statistique et Observations de Chirurgie Hospitalière. Par Dr. Polaillon. 1896.

GREVEL, H., AND CO., King-street, Covent-garden, London, W.C.
Chemistry in Daily Life. By Dr. Lassar-Cohn. Translated by M. M. P. Muir, M.A. Camb. Illustrated. 1895. Price 6*s.*

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., Paternoster House, Charing-cross-road, London, W.C.
B. Bradshaw's Dictionary of Bathing-places and Climatic Health Resorts. With Maps. Price 3*s.* 6*d.*
The Etiology, Symptoms, and Treatment of Gall-stones. By Dr. J. Keraus, Senr., of Carlsbad. With Additional Remarks on Operative Treatment. By H. Morris, M.A., M.B. Lond., F.R.C.S. 1896. Price 5*s.*

LEWIS, H. K., Gower-street, London, W.C.
The Hydro-Electric Methods in Medicine. By W. S. Hedley, M.D. Illustrated. Second Edition. 1896. Price 4*s.* 6*d.*

MACMILLAN AND BOWES, Cambridge.
Alpine Notes and the Climbing Foot. By George Wherry, M.A., M.B. Cantab., F.R.C.S. 1896.

PENTLAND, YOUNG J., Edinburgh and London.
Manual of Practical Anatomy. By D. J. Cunningham. Vol. II. Thorax, Head, and Neck. Second Edition. Illustrated. 1896.
Atlas of the Diseases of the Skin. By H. Radcliffe Crocker, M.D., F.R.C.P. Fasciculus 16. Price One Guinea net.

PHILIP, G., AND SON, Fleet-street, London, E.C.
French Series, No. 1: The Facts of Life. Part 1: Home Life—The School—Travelling—Plants. By Victor Betis and Howard Swan. 1896. Price 3*s.*

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London, E.C.
Twentieth Century Practice: An International Encyclopædia of Modern Medical Science. Edited by F. I. Stedman, M.D., New York City. In 20 vols. Vol. V. Diseases of the Skin. 1896.

SMITH, ELDER, AND CO., Waterloo-place, London, S.W.
The Spas and Mineral Waters of Europe. By H. Weber, M.D., F.R.C.P., and F. P. Weber, M.D., M.R.C.P. 1895. Price 6*s.*

SPRINGER, JULIUS, Berlin.
Lehrbuch der Geburtshülfe. Von Dr. Max Runge. Dritte Auflage. 1896.

THE SCIENTIFIC PRESS, 428 Strand, London, W.C.
Clinical Diagnosis. By W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P.E. 1896. Price 6*s.*

WHITTAKER AND CO., White Hart-street, Paternoster-square, London, E.C.
Modern Optical Instruments and their Construction. By Henry Orford. 1896.
Stuttering, and How to Cure It. By L. Klindworth. Illustrated. 1896.

WRIGHT, JOHN, AND CO., Stone Bridge, Bristol.
A Text-book of Histology, Descriptive and Practical. By A. Clarkson, M.B., C.M. Edin. Illustrated. 1895. Price 21*s.* net.

Lewis's Diet Charts: A Suggestive Set of Diet Tables for the Use of Physicians for Handing to Patients; price 5*s.* per packet of 100 charts, post free (H. K. Lewis, Gower-street, London, W.C.).—The Countess of Dufferin's Fund: Eleventh Annual Report of the National Association for supplying Female Medical Aid to the Women of India for the Year 1895 (Office of the Superintendent of Government Printing, India, Calcutta, 1896).—The Journal of Physiology, vol. xx., No. 1 (C. J. Clay and Sons, London, 1896); price 6*s.*—Contribution à l'Etude du Psidium Pomiferum L.; par Jos. Khouri (Les Bigot Frères, Lille, 1895).—The Statistics and Distribution of Hydatid Disease in the Australian Colonies; by Æneas J. McDonnell, M.D., Ch.M. Syd. (J. E. Stone, Ruthven-street, Toowoomba).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ALDOUS, GEORGE FREDERICK, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Assistant Surgeon to the South Devon and East Cornwall Hospital.

ALEXANDER, ADOLPHUS B., L.D.S. R.C.S. Eng., has been appointed Dental Surgeon to the Western Skin Hospital, Great Portland-street, London.

ANDERTON, W., F.R.C.S., M.R.C.P. Edin., has been re-appointed Medical Officer by the Ormskirk District Council.

CLARK, W. T. M., L.R.C.P. Lond., M.R.C.S., D.P.H., has been re-appointed Medical Officer of Health by the Twickenham District Council.

CODD, A. F. G., M.B. Durh., F.R.C.S., L.R.C.P. Lond., has been re-appointed Medical Officer of Health by the Bromley Urban District Council.

DAVIDSON, ANDREW, M.B. and C.M., Aberd., has been appointed Senior Assistant Medical Officer to the County Asylum, Dorchester, vice Ewan, resigned.

DAVIES, HOWARD, M.R.C.S., has been re-appointed Medical Officer by the Pontypridd District Council.

DAVISON, R. T., M.D. Aberd., M.R.C.S., has been re-appointed Medical Officer of Health by the Battle Urban District Council.

EBERLE, EMILY E., M.B., B.Ch. Irel., has been appointed Surgeon (out-patients' department) to the Bristol Hospital for Sick Children and Women.

FERNIE, E., M.D. St. And., M.R.C.S., has been re-appointed Medical Officer of Health by the Birkenshaw District Council.

FORSYTH, ROBERT, M.D. Glasg., has been re-appointed Medical Officer of Health by the Birkenshaw District Council.

FOXWELL, ARTHUR, M.D., F.R.C.P., has been appointed Examiner in Medicine in Cambridge University.

GALLOWAY, P., M.B., M.S. Aberd., has been appointed Medical Officer for the Willingham Sanitary District of the Gainsborough Union.

GOODHUE, FRED. W. J., B.A. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Physician to the Hospital for Women, Soho-square, W.

GRIFFITHS, A. V., M.R.C.S., has been re-appointed Medical Officer of Health by the Fenton Urban District Council.

HEAD, HENRY, M.A., M.D. Camb., M.R.C.P. Lond., M.R.C.S. Eng., has been appointed Medical Registrar to the London Hospital.

HIND, A., L.R.C.S., L.M Edin., has been re-appointed Medical Officer of Health by the Southampton Town Council.

HUGHES, R. T., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer for the Workhouse and Schools of the Birkenhead Union.

KENDALL, H. W., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Bristol Hospital for Sick Children and Women.

LING, C. A. S., M.R.C.S., has been re-appointed Port Medical Officer, Colchester.

LITTLEJOHN, T. H., has been appointed Analyst for the Borough of Scarborough, vice H. G. H. Monk, resigned.

MACLEOD, D. J. A., L.R.C.S. Edin., has been re-appointed Parochial Medical Officer by the Hawick Town Council.

MATHER, R. O., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Billinge Sanitary District of the Wigan Union.

MILNER, E. A., M.B., M.Ch. Edin., has been appointed Medical Officer for the Sixth Sanitary District of the Bodmin Union.

MORGAN, WM. L., M.A. Exeter College, L.R.C.P. Lond., M.R.C.S., has been appointed Lichfield Clinical Lecturer in Surgery, Oxford University.

MORTON, C. A., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Surgeon to the Bristol Hospital for Sick Children and Women.

POCKLINGTON, E., M.R.C.S., has been re-appointed Medical Officer of Health by the Wimbledon District Council.

RANKIN, PETER, M.B., M.S. Glasg., has been appointed Medical Officer for the Third Sanitary District of the First Division of Greystoke, Penrith Union.

ROBERTS, E. C., M.R.C.S., has been re-appointed Medical Officer of Health by the Southgate District Council.

ROBERTSON, D. W., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer for the Pickering Sanitary District.

ROBERTSON, J., M.D. Edin., B.Sc. (Public Health), has been re-appointed Medical Officer for St. Helens, Lancs.

ROBERTSON, WM., M.D., C.M., Glasg., D.P.H., has been appointed Medical Officer of Health for the Burgh of Auchterarder, vice Thom, resigned.

ROBINSON, E. S., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Stourport Urban District Council.

SCOTT, W. R., M.D., M.Ch. Dubl., has been appointed Medical Officer of Health for Bloemfontein Orange Free State.

SEARLE, GEO. C., M.R.C.S., has been appointed Public Vaccinator for the Brixham and Churston Districts of the Totnes Union.

SEYLER, C. A., has been appointed Public Analyst for the Swansea County Borough, vice W. Morgan.

STARKIE, E. G. B., M.B., C.M. Edin., has been appointed Medical Officer for the Fylde Rural Sanitary District, vice J. Winn.

SWETE, E. H. W., M.D. St. And., M.R.C.S., D.P.H. Camb., has been re-appointed Medical Officer of Health by the Droitwich Rural District Council.

TAYLOR, W. J., L.R.C.P., L.R.C.S. Irel., has been appointed Medical Officer of Health for the Ampthill Sanitary District.

THURSFIELD, W. N., M.D. Edin., M.R.C.S., D.P.H. Camb., has been re-appointed Medical Officer by the Bridgnorth Rural District Council.

WEIR, A. M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Malvern Link Urban District Council.

WILSON, GEO. J., M.A. Oxon., M.D. Dubl., M.R.C.S., has been appointed Lichfield Clinical Lecturer in Medicine, Oxford University.

WINTLE, COLSTON, L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon (out-patients' department) to the Bristol Hospital for Sick Children and Women.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN, Brighton.—House Surgeon, unmarried. Salary £80 per annum, with furnished apartments, board, gas, coals, and attendance.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238, Gray's-Inn-road, W.C.—House Surgeon.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident Junior House Surgeon and Dispenser. Salary £50 per annum, with board, apartments, and laundress.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistants.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY, Wakefield. Junior House Surgeon, unmarried. Honorarium £40 per annum, with board, lodging, and washing.

COUNTY BOROUGH OF HUDDERSFIELD.—Medical Officer of Health for the Borough and Urban Sanitary District of Huddersfield. Salary £400 per annum, with actual disbursements. Applications to the Town Clerk, Town Hall, Huddersfield.

GLAMORGANSHIRE AND MONMOUTHSHIRE INFIRMARY, Cardiff.—Assistant Resident Medical Officer for six months. Board, washing, and apartments provided.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Resident House Physicians.

KENSINGTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £125 per annum, with furnished rooms, coals, gas, and attendance. Applications to the Hon. Secretary, 7, Stamford-road, Kensington-square.

NEW HOSPITAL FOR WOMEN, 144, Euston-road, London.—Two Medical Women as Clinical Assistants for the Out-patient Department.

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence (no stimulants provided). Applications to the Secretary, Newport, Mon.

PADDINGTON-GREEN CHILDREN'S HOSPITAL, London, W.—Ophthalmic Surgeon.

SKAMAN'S HOSPITAL SOCIETY (*Dreadnought*).—House Surgeon for Branch Hospital, Royal Victoria and Albert Docks, E. Salary £75 per annum, with board and residence.—Applications to the Secretary, Greenwich, S.E.

STOCKPORT INFIRMARY.—Assistant House and Visiting Surgeon. Salary £70 a year, with board, washing, and residence.

TAUNTON AND SOMERSET HOSPITAL, Taunton.—House Surgeon for three years. Salary £100 per annum, with board, lodging, and washing in the hospital.

UNIVERSITY COLLEGE, London.—Resident Medical Officer.

UNIVERSITY OF ABERDEEN.—Examiners for Graduation.

WESTERN GENERAL DISPENSARY, Marylebone-road, London.—House Surgeon, unmarried. Salary £60 a year, with board and residence.

WEST HAM HOSPITAL, Stratford, E.—House Surgeon for one year.

WILLITON UNION, Somerset.—Medical Officer and Public Vaccinator for the Stogursey District of the Union. Salary £80 per annum, with certain extra fees. Applications to the Clerk, Williton, Somerset.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Medical Assistant for six months. Board, lodging, and washing provided.

Births, Marriages, and Deaths.

BIRTHS.

BELL.—On June 13th, at Upgate, Louth, Lincolnshire, the wife of Charles W. J. Bell, M.R.C.S. Eng., of a daughter.

KEYWORTH.—On June 6th, at Wem, Shropshire, the wife of George Hawson Keyworth, M.B., of a son.

POWELL.—On June 12th, at Upper Clapton, N.E., the wife of Herbert E. Powell, M.R.C.S., L.S.A., of a son.

PRATT.—On June 11th, at Rugby, the wife of W. Sutton Pratt, M.D., L.R.C.P. Lond., of a daughter.

ROSE.—On June 11th, at Harvey-road, Leytonstone, Essex, the wife of Percy Rose, L.R.C.P. Lond., of a daughter.

RICHARDS.—On June 13th, at 47, Churnet-street, Manchester, the wife of Arthur Izod Richards, M.R.C.S., L.S.A., of a son.

MARRIAGES.

AINSWORTH—BRYDEN.—At St. Paul's Church, Shipley, on June 11th, by the Rev. A. Cribb, Vicar of Shipley, assisted by the Rev. C. Strong, Vicar of Windhill, W. T. Ainsworth, M.B., C.M., Marjoribanks, Windhill, to Jessie, second daughter of the late Robert Bryden, Esq., of Cross Banks, Shipley.

BATESON—DURHAM.—On June 16th, at St. Paul's Church, South Hampstead, by the Rev. T. Field, assisted by the Rev. J. W. Bennett, William Bateson, Fellow of St. John's College, Cambridge, son of the late Rev. W. H. Bateson, D.D., Master of St. John's College, to Caroline Beatrice Durham, daughter of the late Arthur Edward Durham, F.R.C.S., Consulting Surgeon to Guy's Hospital, Member of the Council and Past Vice-President of the Royal College of Surgeons, England.

BROCK—BUTLER.—On June 11th, at St. George's, Wrotham, Kent, by the Rev. Canon Erskine Knollys, George Sandison Brock, M.D., C.M., F.R.S.E., of Rome, to Lily Maria, youngest child of J. Hampden Butler, of Ashford, Middlesex. (South African papers please copy.)

BRAUND—SHEARME.—On June 10th, at St. Matthias's Church, Plymouth, Arthur Robert Mather Braund, M.R.C.S., L.R.C.P. Lond., of Hill-side, Stratton, to Margaret Jane Shearme, daughter of the late Edward Shearme, of Stowe, Kilkhampton.

BUCHANAN—ATKINSON.—On June 15th, at the British Consulate, Lausanne, and at Christ Church, George Seaton Buchanan, M.D., of London, son of the late Sir George Buchanan, M.D., F.R.S., to Rhoda Atkinson, daughter of the late Thomas Atkinson, of Windermere.

GIVEN—GARNETT.—On June 10th, at St. Ann's Church, Turton, Lancashire, John Cecil Mackmurdo Given, M.D. Lond., of Mossley-hill, Liverpool, to May, eldest daughter of J. Garnett, of Bromley-cross, near Bolton.

HOARE—GOWLAND.—On June 10th, at Holy Trinity Church, Eastbourne, by the Rev. W. A. Bathurst, Edwin Stanley Hoare, M.R.C.S., L.R.C.P., son of the late Joseph J. Hoare, and grandson of the late S. P. Low, J.P., of Round Hill Villa, Sydenham, to Jessie May, only daughter of Thomas Stafford Gowland, of Eastbourne.

DEATHS.

ARMITAGE.—On June 4th, at Greenhithe, Kent, Alice, the dearly-loved wife of S. H. Tatham Armitage, M.D., 39, Grosvenor-street, W., aged 63 years. Funeral took place at Scarborough, June 8th. Friends will please accept this intimation.

AYRE.—On June 9th, at Cheltenham, William Gordon James Ayre, Fleet Surgeon R.N., in the 70th year of his age.

KIRBY.—On June 15th, at Cambridge-terrace, Hyde-park, Thomas Charles Kirby, M.D., in the 63rd year of his age.

PAGET-BLAKE.—On June 12th, at Alverstoke Vale, St. Marychurch, Torquay, Charles Paget-Blake, M.D., F.R.C.P., Retired Surgeon R.N., aged 76.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 18th, 1896.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp Shade	Min Temp	Rainfall	Remarks at 8.30 A.M.
June 12	30·08	N.W.	65	61	120	81	58	...	Hazy
,, 13	30·07	S.E.	71	64	128	84	61	...	Hazy
,, 14	30·09	E.	64	61	118	84	60	...	Overcast
,, 15	29·93	E.	65	62	128	86	60	...	Fine
,, 16	29·73	S.W.	74	68	123	85	65	...	Fine
,, 17	29·68	S.W.	69	62	121	69	62	...	Cloudy
,, 18	30·02	N.W.	65	59	120	72	54	0·06	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (22nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.).

TUESDAY (23rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (24th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (25th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Great Northern Central (Gynæcological, 2.30 P.M.).

FRIDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.) Gt. Northern Central (2.30 P.M.).

SATURDAY (27th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (22nd).—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. W. R. H. Stewart: Some complications of Middle Ear Suppuration.

TUESDAY (23rd).—HOME FOR TREATMENT OF WOUNDS AND ULCERS BY OXYGEN (35, St. George's-sq.).—4 to 5.30 P.M. Demonstrations of Treatment, Apparatus, and Cases.

WEDNESDAY (24th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Selected Cases.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. W. Hunter: Pathological Demonstrations.

THURSDAY (25th).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Detection of Drugs in Urine.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Hopkins: Clinical Lecture.

VICTORIA HOSPITAL FOR CHILDREN (Tite-street, S.W.).—4 P.M. Mr. Waterhouse: Adenoid Vegetations in the Naso-Pharynx and their Treatment.

HOME FOR TREATMENT OF WOUNDS AND ULCERS BY OXYGEN (35, St. George's-sq.).—4 to 5.30 P.M. Demonstrations of Treatment, Apparatus, and Cases.

FRIDAY (26th).—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tetanus, Rabies, and Cholera.

SATURDAY (27th).—HOME FOR TREATMENT OF WOUNDS AND ULCERS BY OXYGEN (35, St. George's-sq.).—4 to 5.30 P.M. Demonstrations of Treatment, Apparatus, and Cases.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

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THE HEAT.

To the Editors of THE LANCET.

SIRS,—To the medical man next in importance to the study of his patient's constitution is the study of what Sydenham called the "constitution of the season." Without any pretensions to extra foresight we may assume that we have got to deal with a hot season. For some weeks past—though we are now only in the middle of June—we have had summer weather with scarcely any rain till the beneficent fall of last week. One morning this week at 8 o'clock the outside thermometer in the shady side of the house was 70° F., and the underground thermometer, four feet deep, recorded a heat of over 55°—a temperature which, as Dr. Ballard tells us, has warnings for those concerned with the public health. It becomes a public question how to reduce the risks of such an extreme of temperature, to which, coming so seldom in our somewhat dull climate, we are apt to be inattentive. Apart from risks of sunstroke, with its head congestion and high temperature, dyspnœa, and heart failure, we may expect to see various degrees of "heat-exhaustion," characterised by great prostration and low temperature and liability to summer catarrhs. Epidemic diarrhœa is not seen now on such a scale as was common before the sanitary era initiated by Chadwick, Simon, and others, and which made summer a busy season for medical men. But it is still serious enough to figure largely in the public bills of mortality of the season. It has never yet been shown exactly how much of the influence of the sun, as we have it, is due to its direct effect on the human body, and how much to its effect on food, drink, &c. To be forewarned is to be forearmed. Insolation with us is a much more preventable accident than in most countries. We have only to practise a few of the most obvious precautions to escape its risk in any serious form. One of these is to do most of our work in the cooler periods of the day, early and late, while the sun is not putting forth all his power. Another point is to make much of the night by cooling down bedrooms, and by a window open a little top and bottom to secure fresh air to favour sleep. The regulation of food is another chief security. Animal food cannot be dispensed with, but it should be in light forms and moderate quantities, often cold with salad, instead of hot with questionable new potatoes. Above all things in hot seasons care is necessary in the use of alcohol. Beer and spirits are recognised as dangerous in hot countries. Light wine well diluted and, at the proper time, tea, or coffee, are sustaining.

I am, Sirs, yours truly,

June 15th, 1896. M.D.

Mr. Richmond Leigh.—We agree with our correspondent to a certain extent, but he must remember that the addresses were delivered not to specially scientific audiences, but to the members of the medical corporations.

Vaccination must send us full particulars before we can answer his question. Where were the diplomas obtained and when?

"AN INSURANCE OFFICE AND A MEDICAL REFEREE."

To the Editors of THE LANCET.

SIRS,—In the issue of THE LANCET of May 2nd you kindly inserted under this heading a summary of some correspondence between the manager of the Sickness and Accident Association of Edinburgh and myself, and this summary was absolutely correct, but the manager directly contradicts my statement that they offered me 5*s.* for the examination. My only desire in forwarding the correspondence was to point out the unsatisfactory basis of insurance fees, with the hope that some more reasonable basis might ultimately be suggested, but I did not wish to introduce in any way personal considerations, and therefore asked him to correct the mis-statement which he had made, but apparently he prefers that I should be regarded as a perverter of the truth. I now enclose letters from him and from his agent acknowledging that the offer of 5*s.* was made, although they now say that it was made "in error," and that the magnificent sum of 7*s.* 6*d.* should have been stated instead. I do not wish to comment upon this behaviour, but I trust that you will insert this letter in fairness to me and also in order that your readers may form their own estimate of the office. I have withdrawn my own policy.

I am, Sirs, yours truly,

Great Berkhamsted, June 8th. SIDNEY A. BONTOR.

*** Dr. Bontor encloses two letters, one from the manager of the Sickness and Accident Assurance Association, Limited, and the other from Mr. P. F. Maples, St. John's Vicarage, Mansfield, an agent for the same Association. The manager states that the offer of 5*s.* was not made by the authority of the Association, though he adds "that it was made I do not for a moment dispute." The agent says that he made a mistake in offering 5*s.*, and he appears to think that Dr. Bontor ought to have detected that he was new at his work. It is quite clear that Dr. Bontor's statement, upon which we founded our remarks on May 2nd, 1896, was entirely exact, and that the manager's contradiction, which we inserted on May 16th, was incorrect. The offer which the manager says was not made was made, and by an agent of the association.—ED. L.

T. L. H.—Our correspondent does not specify for what object he wishes to consult the works about which he enquires. The best book of reference is not necessarily the best manual for an examination. Fagge's, Bristowe's, Osler's, Taylor's, and Roberts's treatises on Medicine, Erichsen's, Holmes's, and Treves's on Surgery, are household words, and Quain's Dictionary of Medicine must not be omitted; the first volume of Dr. Clifford Allbutt's System of Medicine is now out, while many of the articles in Reynolds's System are as well worth reading now as they were when they were written.

"IODISM."

To the Editors of THE LANCET.

SIRS,—I have read your correspondent Dr. A. Veitch's letter *re* Iodism, and the results of his use of the iodide with morphia and also atropia are certainly satisfactory. I should like to know if he has ever tried or knows anything of the strontium iodidi, which I venture to think he will find most satisfactory in all cases. I shall be glad to hear, if your correspondent should give this drug a trial, what results he has experienced. It is to be had in the very convenient form of tablets, which quickly disintegrate. The bromide strontium also is most valuable.

I am, Sirs, yours faithfully,

Harlesden, June 13th, 1896. R. FOSTER OWEN, M.R.C.P. Irel.

Ethics.—Our correspondent informs us that he knows of a case where a gentleman who had been debt collector to a medical man became a qualified medical practitioner, and returning to the neighbourhood proceeded to tout among his old master's clients, trading on his knowledge of their circumstances. It should be added that his master had been succeeded in practice by another medical gentleman, who, we are informed, is suffering from this touting, "several well authenticated cases" having occurred where the patients were invited to give the late collector a trial. We are asked to express an opinion, and can only say that if "Ethics" is correct in his facts the medical man whose patients are invited to try some one else has a right to feel aggrieved.

Dr. H. Mallins.—Apply to the Secretary, Swedish Turist Forening, Stockholm.

Squirt has not given his name and address.

THE PROFESSOR OF BOTANY AT CAMBRIDGE.

To the Editors of THE LANCET.

SIRS,—In your notice of the current number of *Science Progress* which appears in THE LANCET of June 13th, you observe that "on the title page ..... the name of the late Dr. Marshall Ward still appears." Of course this was written under a misapprehension of the fact that Dr. Ward is still Professor of Botany at Cambridge.

I am, Sirs, yours faithfully,

June 16th, 1896. J. BRETLAND FARMER.

*** We apologise to Professor Marshall Ward for the blunder.—ED. L.

PROFUSE ANTE-PARTUM HÆMORRHAGE CAUSED BY WOUND OF THE VAGINA.

To the Editors of THE LANCET.

SIRS,—A short time ago I was summoned to a case at some distance, the message not stating its nature, so that I went unprepared for midwifery. On arriving I found that it was a confinement and the woman had been in labour over twenty-four hours. She had lost a large quantity of blood and I found her approaching a state of collapse, the bleeding having commenced two hours previously to my arrival. On examination I found the cervix well dilated, the head presenting, and the membranes intact. No laceration could be detected in the cervix and no sign of a ruptured varicose vein at the vulva. The blood appeared to come from an artery in the anterior wall of the vagina, and I was puzzled to account for it. An antiseptic plug of lint was passed into the vagina and held against the anterior vaginal wall; this effectively controlled the hæmorrhage. Shortly after this I ruptured the membranes with my finger and the child was born in a few minutes. The placenta was expressed and the uterus contracted well. The hæmorrhage ceased after delivery. A neighbour who was acting as midwife was attending her, and there was also a second woman present, who took me aside afterwards and told me the cause of hæmorrhage was due to the woman acting as midwife, who, wishing to bring the labour on quicker, had taken a pair of sharp-pointed scissors with the intention of "clipping the waters," as she expressed it. Instead of doing this she wounded the anterior wall of the vagina, with the result that hæmorrhage came on immediately. The woman afterwards admitted that she had done it in previous cases. The patient was in a very feeble state for the subsequent three days, her temperature on the second and third day being 100° F. and 101° respectively, and I began to fear some septic absorption had taken place, but her condition improved in a few days and she did well. The vagina was syringed out every day with a warm solution of permanganate of potash. The woman in attendance received such a fright that I do not think she will repeat the proceeding. My excuse for publishing this case is to put on record the disastrous consequences which might ensue from an ignorant person tampering with a labour case.

I am, Sirs, yours truly,

E. G. RENNY, M.R.C.S. Eng., L.R.C.P. Lond.

Colchester, June 15th, 1896.

Volunteer.—A surgeon-lieutenant must first ascertain that a commanding officer of a regiment or bearer company of the Volunteer Medical Staff Corps is willing to accept his services. He will then receive from the adjutant a printed form to fill in, consisting of a series of questions, with certificates of moral character, &c. This form, signed by the applicant, is sent through the adjutant to the officer commanding the regiment or bearer company, and by him transmitted, with a letter of approval, to the War Office. The appointment will be gazetted in about a fortnight. He must hold a double qualification. There is no age limit except the age at which he must retire—viz., sixty years, or by special permit it may be extended. When gazetted he can obtain £10 towards the cost of his uniform, and after passing the "P" or "P.S." examination a second £10, so that he receives £20 in all; but if he withdraws before three years he will have to refund the sum to the Government.

Mr. D. Ainsley.—Our correspondent is thanked for his letter, the subject of which we will notice if possible shortly. It is one which might well be brought forward at a medical congress.

A. R.—Our correspondent does not seem to have registered his qualification. The editors of the "Medical Directory" are exercising a proper discretion in deciding that he is not a British practitioner residing abroad, but a German with a British qualification.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Eastern Morning News, Manchester Courier, Scotsman, Civil Service Gazette, Leicester Post, Dundee Advertiser, Hampshire Independent, Cheltenham Mail, Stratford Advertiser, Glasgow Herald, Huddersfield Examiner, Retford News, Bridgwater Independent, South Wales Post, South London Mail, National Observer, Newcastle Journal, Accrington Observer, Western Daily Mercury, Birmingham Gazette, Sussex Daily News, Worcestershire Chronicle, Oban Times, Liverpool Daily Post, Times of India, Blackburn Times, Pioneer Mail, Doncaster Chronicle, Brighton Argus, Builder, Bristol Times, Liverpool Courier, Oldham Standard, Yorkshire Post, Halifax Guardian, Leeds Mercury, Burnley Express, Bolton Journal, Architect, Bristol Mercury, Westminster Gazette, Sanitary Record, Brighton Gazette, Le Temps (Paris), Weekly Free Press and Aberdeen Journal, Lincoln Mercury, Mining Journal, Reading Mercury, Hemel Hempstead Gazette, City Press, Hertfordshire Mercury, Le Courrier de la Presse, Local Government Journal, Surrey Advertiser, West Ham Guardian, Keble's Margate and Ramsgate Gazette, Citizen, North Queensland Herald, Colchester Mercury, Shrewsbury Chronicle, Bury Guardian, Blackpool Gazette, Wigan Examiner, Hereford Times, Derry Journal, Poole Herald, Middlesex and Surrey Express, Torquay Directory, &c., &c.*

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